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A N

ENQUIRY

INTO THE

NATURE, CAUSES, AND CURE

OF THE

CONSUMPTION OF THE LUNGS:

WITH SOME

OBSERVATIONS

ON A

LATE PUBLICATION ON THE SAME SUBJECT.

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Των νόσηματων ὁ, τι ἂν ἐπικινδυνόλατον ἔςιν, ἐν τούτοισι Παρακινδυνευειν χρὴ· επιτυχων μεν γὰρ ὑγιεα ποιησεις, ατυχήσας δὲ ὅπερ καὶ ὡς ἔμελλε γένεσθαι.

Hipp. lib. de loco in homin. ap. Fœſ. p. 417.

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PREFACE.

A PERSON who undertakes to deliver the hiſtory and cure of a diſeaſe which is generally deemed incurable by Phyſicians, may appear not a little enterpriſing and preſumptuous. This conſideration alone, might be ſufficient to damp the ſpirit of enquiry in an author, and deter him from entering on a ſubject involved in ſo much intricacy, wherein ſeveral perſons eminent in a conſpicuous degree for their abilities, have laboured to ſo little advantage. But ſuch a reflection ſhould rather prove an incentive to induſtry, and rouſe men from that ſupineneſs and indolence, into which the human mind is ſo apt to fall, at the ſight of any difficulty, that requires ardor and perſeverance to reſcue it from obſcurity. The more abſtruſe, and ſeemingly inſcrutable the cauſes of any diſeaſe happen to be, the more warrantable and praiſeworthy, in my opinion, are the endeavours of an author to remove the cloud that ſhades them from the philoſophic eye; for though his expectations ſhould be unhappily fruſtrated, he has ſtill one vain conſolation, that the moſt diſtinguiſhed of the profeſſion, have ſhared no better fate. With ſuch an apology, I have ventured to ſubmit the following Treatiſe on the Conſumption of the Lungs to the inſpection of the Public.

Since the days of Hippocrates, down to the preſent time, the Conſumption of the Lungs has deſervedly engaged the attention of Phyſicians. Whether we aſcribe its obſtinacy to the want of ſagacity in finding out its cauſes, or to the inefficacy of medicine, the fact is, that, it has continued for many centuries ravaging, with undiminiſhed violence, the human race; perhaps deſtroying more lives than the united efforts of the plague and famine: for though, at different periods, ſeveral remedies have been propoſed and delivered to the world as ſpecifics; yet ſucceeding times have rejected them all, neglecting ſome as inactive, and condemning others, on account of their noxious qualities. Hence, Phyſicians have confined their patients totally to a certain diet and regimen, finding, by experience, that the better part of the Medicines uſually employed, were of a ſtimulant and heating quality, and tended to aggravate, rather than relieve, in any degree, the ſymptoms of the diſeaſe. In the lungs of thoſe who have fallen victims to the Phthiſis, tubercles have been commonly diſcovered after death; ſome in an inflamed, and others in an ulcerated ſtate: hence a total abſtinence from animal food has been univerſally and rigorouſly enjoined; on a ſuppoſition, that the ſtimulant quality of this food would inflame and bring to ſuppuration the tubercles.

A milk and vegetable diet, of courſe, has been commonly employed; and is ſaid to have been attended with the moſt beneficial effects: ſome alleging that theſe aroſe from the mild and emollient nature of the milk, in defending the parts from the abſorbed acrimony of the ulcers: while others explain its operation, from an idea of its being of a lower quality than any food entirely animal.

Of late, an ingenious Phyſician, Dr. *Raulin*, of Paris, has objected to the uſe of a milk diet, in the Conſumption of the Lungs; his experience has probably led him in ſome inſtances to form this opinion, though the theoretical principles he has deduced from it, be altogether unphiloſophical. He very improperly ſuppoſes, that the milk in its circulation through the lungs, augments the tubercles by it caſeous parts; and thereby aggravates the diſorder. His words are, "Le lait de luimême en circulant dans les vaiſſeaux des poumons, laiſſe dans les glands de ce viſcere, qui ſont deja engorgées des molécules de ſa partie caſeuſe, qui augmentent les engorgemens tuberculeux, les multiplient, concourent arendre la maladie plus grave et plus dangereuſe*." Though the fact may be partly true, with regard to this diet; yet every perſon, any way converſant in the œconomy of the human frame, muſt clearly perceive the weakneſs of the argument advanced by this ingenious writer: indeed it is altogether ſo fanciful, that it carries its own condemnation with it.

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* Traité de Phthiſie Pulmonaire. Par M. Raulin.

Though unwilling to adopt Dr. Raulin's reaſoning on this ſubject, I ſtill venture to allege, that the common, vague, and unlimited method of rigorouſly confining patients to a milk diet in every caſe of Phthiſis Pulmonalis, has often proved a dangerous practice, and that a more liberal uſe of animal food than is uſually preſcribed, would be attended in certain ſpecies of this diſorder with more advantage and ſucceſs. This ſubject I muſt, at preſent, diſmiſs; as it will meet with full diſcuſſion hereafter.

KILKENNY,
12th June, 1786.

A N

ENQUIRY, &c.

IT is a general rule with medical writers, in treating of diſeaſes, to deſcribe their hiſtory with as much minuteneſs and accuracy as poſſible. Indeed, in writing on any diſeaſe whatſoever, this method ſeems unavoidably neceſſary: but whether it may or may not appear ſuperfluous in this work, remains a little doubtful. The hiſtory of the Phthiſis Pulmonalis, has already been fully deſcribed by ſeveral authors, remarkable for their judgment and penetration: ſo that very little new matter is left to ſucceeding Authors to advance on that ſubject. But as a want of method might render the work unſcientific and confuſed, I think it neceſſary to obſerve the uſual order and regularity. I the more readily adopt this plan, as there are certain points in the hiſtory of the Phthiſis Pulmonalis, about which Phyſicians have not as yet come to a perfect agreement: it is therefore allowable to begin with ſetting down the definition of the diſeaſe:

A diſcharge of purulent matter from the lungs, attended with emaciation, debility, cough, and hectic fever.

But it may be objected to this definition, that a Conſumption of the lungs may begin, and proceed to its fatal termination, without the expectoration of pus, as ſometimes happens in the caſe of a Vomica; which, after it has exhauſted the body with a hectic fever, burſts, and ſuddenly ſuffocates the patient. In ſuch an inſtance as this, an exquiſitely formed Phthiſis appears through the whole courſe of the diſeaſe; though no purulent ſpitting occurs in any of its ſtages: but, as this ſpecies is alſo deficient in ſymptoms, it will be the moſt eligible method, to find a definition that will comprehend, if poſſible, every caſe that may happen. The definition given by the ingenious Dr. Cullen, in his ſyſtem of Noſology, will probably anſwer every purpoſe.

" Corporis emaciatio et debilitas cum
" tuſſi, febre hectica, et plerumque ex-
" pectoratione purulenta *."

In this definition every characteriſtic ſymptom that commonly occurs in the advanced ſtage of Phthiſis, is conciſely mentioned, and any objection that may be made to the former, is obviated here by adding the adverb plerumque. It muſt ſtill be admitted, that this definition will afford us very little aſſiſtance in diſcovering the diſeaſe in its incipient and diſguiſed form, and that irregularities will often be met with in every ſtage, which, neither the definitions nor the hiſtories of the diſeaſe, as delivered to us by writers, will point out.

The firſt ſymptom that uſually manifeſts itſelf, is a ſlight tickling cough, analogous to what occurs in a common catarrh, not attended with febrile ſymptoms; but for the moſt part, there is a peculiarity in a Phthiſical cough (when preſent for any length of time) eaſily diſtinguiſhed from a catarrhal one, by thoſe who are well acquainted with both. The former pretty much reſembles a ſound iſſuing from ſome
hollow

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* Vid. Synopſ. Noſol. Method. Cullen.

hollow cavity, while the other ſeldom or never diſcovers any ſuch ſimilarity. On the whole, they are both better conceived than expreſſed, and a little experience in this matter, will be a means of aſſiſting us in forming a proper diagnoſtic in the more early ſtage of the diſeaſe. This Phthiſical cough continues for months, and ſometimes for years, returning at intervals, without producing much inconvenience; ſo that the patient looks upon it as merely the effect of a tranſitory cold, and generally neglects the uſe of remedies until the diſorder has made a conſiderable progreſs. In this inſidious manner, it ſteals on imperceptibly. The patient, unconſcious of the danger that threatens him, frequently expoſes his body to cold, by which the cough is remarkably aggravated, and the diſeaſe advances with rapid ſtrides.

A languor and inactivity begin to occupy the frame, and are particularly marked by a want of the patient's uſual exertion and animation; he diſcovers an averſion to any motion or exerciſe that is attended with the ſmalleſt fatigue. The countenance alſo is remarkably changed, and exhibits a wan, pale, and delicate appearance; in ſhort, there are evident ſigns of a general decay of the body, even in this incipient ſtate of the dieaſe. The ceſſation of the menſes in the female ſex, has been obſerved to occur at this early period, and may with propriety be aſcribed to the defect of a due propulſive power in the arterial ſyſtem. While matters proceed in this manner, the cough goes on gradually increaſing, and becomes eſpecially troubleſome at night. The breathing at length is affected, and rendered very difficult by any exertion that accelerates the motion of the blood through the *Lungs*.

It ſhould here be obſerved, that a ſenſe of ſuffocation, from running or walking up a riſing ground, often attends certain diſeaſes of the thorax: as, the Angina Pectoris, dropſy of the lungs and Pericardium, a preternaturally irritable ſtate of the heart, organic affections of its ſubſtance, and the great veſſels annexed to it, as well as a tuberculous ſtate of the lungs themſelves. If a cough ſhould accompany any of the above diſorders, which is very frequently the caſe; the diſtinguiſhing ſymptoms will ſtill be involved in greater obſcurity. But a Phyſician who is ſufficiently on his guard, and puts the proper queſtions to his patient, will ſeldom be miſtaken in the diagnoſtics. There is a certain ſymptom, when it happens to be preſent (with ſome other corroborating ones) which proves in moſt caſes, an almoſt infallible teſt of the exiſtence of tubercles in the lungs. This is a continued wheezing on every inſpiration that is performed. In ſome perſons the noiſe is remarkably loud, reſembling the ſound that is heard in the Cynanche Trachealis; but in others you cannot diſtinguiſh it, except by applying your ear cloſe to the patient's head while he draws in the air.

The matter at firſt ſpit up by coughing, is merely a quantity of mucus diſcharged with difficulty, which readily floats on the ſurface of water; by degrees, the matter aſſumes a viſcid, and opake appearance, and changes moſt commonly from a white, to a yellow or greeniſh colour. About this time, the pulſe begins to ſuffer a remarkable alteration, though nearly natural, during the catarrhal ſtate, (if I may be allowed to ſpeak ſo) it now grows more frequent in the morning and afternoon. The exacerbations at length are completely formed, and a hectic, with all its horrors, enſues. Though I have juſt now ſaid, that the pulſe is nearly natural, until the approach of the hectic fever; it muſt notwithſtanding be owned, that the contrary moſt commonly takes place: for the pulſe has often been found exceedingly quick for ſeveral months before any ſymptoms of a hectic fever declared themſelves. When ſuch a circumſtance takes place (together with the ſymptoms already mentioned) I conſider it as a ſtriking proof of the exiſtence of inflamed tubercles, or of an abſceſs from ſome other cauſe, forming in the *Lungs*.

A hectic fever has been commonly ſaid to conſiſt of two paroxyſms or fits: the one occurring about mid-day, and the other ſomewhat late in the afternoon. The firſt has often been found altogether ſo ſlight, that it has frequently eſcaped the notice of the patients themſelves, and had they not been examined very narrowly on the ſubject, a perſon could ſcarcely underſtand from them, that any exacerbation had taken place. Indeed, if any food happens to be eaten about twelve o'clock, the feveriſh ſtate becomes more perceptible. The ſtimulus of food has always the effect of producing a temporary quickneſs of the pulſe, and when a fever is to ſupervene at a certain time from ſome internal cauſe; the taking of aliment about the ſame period, will inevitably aggravate the febrile ſymptoms: but, as in theſe countries, they ſeldom or never ſit down to dinner at noon, it will require, at times, ſome attention in the Phyſician to diſcern the exiſtence of the paroxyſm. The ſecond, however, is generally better marked, and uſhered in with the ſymptoms that uſually attend an Intermittent or continued fever, though not near ſo violent or diſtreſſing in its cold or hot ſtage.

About five or ſix o'clock in the afternoon the patient is ſeized with languor and debility, attended with a ſlight ſenſation of coldneſs and ſhivering, ſpeedily yielding to a degree of heat greater than natural, which ſpreads itſelf all over the body, and continues till a ſweat breaks out, which terminates the paroxyſm; this commonly happens about two or three o'clock in the morning. A circumſtance with reſpect to the ſweat in this fever, different from what is to be met with in others, deſerves to be mentioned In the Hectic, it is moſt commonly confined to the upper parts, as to the thorax, face, and arms; and though at times it ſpreads along the inſide of the legs and thighs, yet it is ſeldom or never univerſally diffuſed over the ſurface. Though this is the ordinary courſe of things in the hectic fever, it muſt however be allowed, that Hectic fevers, from ulcers in the lungs, are ſometimes to be ſeen without any exacerbation whatſoever. Towards the end of the fit, the urine depoſits a red and branny-like ſediment. The thirſt that attends it is very inconſiderable. The tongue appears moiſt and clean, until a very advanced period of the diſeaſe, when it ſhews ſome ſigns of inflammation, and is *covered with Aphthæ.* It has been remarked, and I believe with much propriety, that a delirium has ſeldom accompanied a hectic fever. The falling off of the hairs, the adunque form of the nails, the ſhining white appearance of the tunica adnata, and edematous ſwelling of the legs, with other ſymptoms, have been deſcribed and accounted for, by moſt writers on this diſeaſe; of courſe deſerve no conſideration in this treatiſe. It rarely happens that the Phthiſis ariſes to any dangerous height, before a pain is felt in ſome part of the thorax: by ſome patients it is felt in the ſternum, but by others, in one ſide, diſcoverable by a full inſpiration, or by coughing. However, ſome inſtances are to be met with, wherein no pain can be diſcovered, by any method we can make uſe of: in ſuch caſes, a difficulty of breathing, or a fit of coughing, brought on by lying on either ſide, muſt be looked upon as truly characteriſtic, as if a pain had been actually felt by inſpiration or otherwiſe.

Some late writers have thought proper to aſſert, that the hectic fever which I have now deſcribed, ariſes from a different ſource than the abſorption of purulent matter from an ulcer in the lungs. This phænomenon is ſupported by ſo many well authenticated facts, that it is not a little extraordinary to find writers, through a principle of novelty, endeavouring to fabricate new theories on the ſubject. It may happen indeed that ſome anomalous ſymptoms of hectic might originate from other cauſes beſides thoſe we have mentioned, but never, I apprehend to ſuch a complete and exquiſite degree, as the fever we have now deſcribed exhibits.

The pernicious effects attendant on many ulcers of the external, as well as of the internal parts, are evidently owing to the abſorption of an acrid, purulent matter; no other ſuppoſition can explain the quickneſs of the pulſe, debilitating ſweats, and other hectic ſymptoms, which follow abſceſſes of different kinds.

Although a hectic fever may ariſe from a quantity of pus encloſed in a cyſt, yet it ſeldom appears in ſo malignant a form, as when the ſurface of the ulcer is expoſed to the influence of the air.

Some Surgeons now are ſo fully convinced of this fact, that they never attempt the cure of large abſceſſes by inciſion, but more properly employ a ſeton, which prevents the acceſſion of the air and its pernicious conſequences. From this conſideration, I am naturally led to join in opinion with moſt practitioners, that the continual application of the air to the ulcer in the lungs, is a principal means of increaſing its malignancy. Purulent matter in the liver and lungs, excluded from the influence of the air, has been found to continue for a long time without many hectic ſymptoms; however, in ſuch caſes, there was always obſerved a conſtant frequency of pulſe, which pointed out the exiſtence of an acrimony diffuſed through the ſyſtem.

It may be ſuppoſed, that a hectic fever might come on in conſequence of the irritation of the air independently of any abſorption; but this opinion is quite conjectural,

jectural, while many facts appear to confirm that of abſorption. An inconſiderable portion of the variolous matter, taken up by the abſorbents from a very ſmall abſceſs, is very well known to be the ſole cauſe of the fever attending the innoculated ſmall pox. The fever of the meaſles alſo depends on the abſorption of ſome acrid matter; and I have no heſitation to declare, that all contagious fevers, eſpecially the eruptive, ariſe from ſome acrid ſubſtance taken in at the mouth, and abſorbed by the lymphatics from the ſtomach, after it is conveyed by means of the ſaliva into that organ. I could adduce many more facts and circumſtances in ſupport of this doctrine, did I think it merited ſo minute an inveſtigation: I ſhall therefore only attempt a refutation of the concluſion drawn from ſome caſes; which may be thought to favour the idea of a hectic fever, from a different cauſe than from an ulcer or abſceſs.

The hiſtories of a few patients, narrated by the late Mr. De Haen, where an expectoration of purulent matter took place,

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without any ulcer appearing on diſſection, have been quoted in ſupport of this opinion: but I apprehend when they are critically examined, they will not afford much proof or conviction. I ſhall examine two of the moſt plauſible caſes. In one of the patients, the ſputa, flava, ſubvirida, craſſa, magna, aquæ ſalſæ ilico petentia fundum,* are the only circumſtances that can add any weight or conſequence to De Haen's ſuppoſition; for he gives not the ſlighteſt hint of a hectic fever having accompanied the diſeaſe; and neither the yellowneſs, green colour, or viſcidity of the matter can, on any account, be deemed an infallible teſt of the exiſtence of purulency; as the mucus of the lungs has been frequently obſerved to aſſume all the different appearances juſt now mentioned. We will the more readily reject De Haen's inference from his data, if we conſider that he employed it as an inſtrument for fabricating the fanciful theory of pus being formed in the circulating fluids.

Another caſe is, that of a perſon far advanced in an Aſcites, who was at the ſame

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* De Haen's Ratio Medendi, vol. i. p. 43.

ſame time affected with a purulent diſcharge from the lungs, and expired on the fourth day after he came under his inſpection. He alleges, it's true, that this patient laboured under a hectic fever; but in all probability this fever was nothing more than what happens to moſt hydropic patients, ſome days previous to their diſſolution. Why did not De Haen make mention of ſo eſſential a circumſtance as the hectic fever, in the firſt patient? Undoubtedly he would, if any ſuch fever appeared, and the purulent-like ſpitting, he deſcribes in the ſecond, may be readily accounted for, without a very accurate knowledge of the pathology of Aſcites.

The large quantity of water generally contained in the ſac of the peritoneum in this diſeaſe, by preſſing upon the diaphragm, will neceſſarily render the capacity of the thorax narrower; hence the irritation given to the lungs, will have the effect of forcing out the mucus from the follicles. As the diſeaſe advances, a violent ſtate of relaxation and debility keeps pace with it, which favour the ſecretion of this ſubſtance; and accordingly we in general find towards the fatal period, the ſputa copious, viſcid, and putting on a purulent appearance: yet we ſeldom diſcover on diſſection, the ſmalleſt veſtige of an ulcer. But admitting that De Haen's objections were incontrovertible, and that two or three inſtances of a hectic fever have occurred where there was not the ſmalleſt reaſon for ſuppoſing it to have ariſen from any ulceration: ſtill a few rare occurrences of this kind will not be ſufficient to diſturb a general rule, and overturn the diſſections and opinions of almoſt all phyſicians who have wrote on the phthiſis. Before I diſmiſs this ſubject, I muſt beg leave to quote a paſſage from a writer whoſe authority I expect will be a ſtrong ſupport to the doctrine I eſpouſe.

" The hectic fever now deſcribed as ac-
" companying a purulent ſtate of the
" lungs, is perhaps the caſe in which it
" moſt frequently appears; but I have
" never ſeen it in any caſe, when there
" was not evidently, or where I had not
" ground to ſuppoſe, there was a perma-
" nent

“ nent purulency or ulceration in ſome
“ external or internal part. It was for
“ this reaſon that I concluded it to be a
“ ſymptomatic fever only. Indeed it ap-
“ pears to me, to be always the effect of
“ an acrimony abſorbed from abſceſſes or
“ ulcers, although it is not equally the
“ effect of every ſort of acrimony; for
“ the ſcorbutic and cancerous kinds often
“ ſubſiſt long in the body, without pro-
“ ducing a hectic *.”

An expectoration of a matter reſembling pus, in conſiſtence, and colour, has frequently happened in the Catarrhus ſenilis, and Peripneumonia Notha. But as the Phthiſis Pulmonalis very ſeldom appears at an advanced period of life, practitioners need not be ſolicitous about the ſputa of aged valetudinarians. But if in youth and in riper years, the mucus of the lungs be coughed up, in quantity and quality different from its natural ſtate; whether this comes on in conſequence of a preceding catarrh, fever, or pleuriſy; it will be a matter of no ſmall importance to determine with preciſion, the difference that ſubſiſts between

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* Vid. Cullen's Firſt Lines, vol. ii. p. 369. Edinb. Edit. 1784.

between this mucus, and a real purulent ſubſtance. To accompliſh this purpoſe, ſome experiments and obſervations have been ſet on foot, which are ſaid to eſtabliſh a criterion, whereby pus can with certainty be diſtinguiſhed from mucus. I ſhall, notwithſtanding, offer a few remarks upon them, as I entertain ſome doubts of their accuracy. As mucus is commonly lighter than water, it floats in the liquid; while pus, which is generally heavier, ſinks to the bottom. This circumſtance alone has been conſidered by ſeveral as deciſive, in pointing out their reſpective qualities: yet, others contend, that we may be deceived in this concluſion; as pus, which has collected a portion of air, may be ſuſpended in the fluid, and mucus that contains none, may ſink to the bottom. Whenever a perſon attends carefully to the ſputa diſcharged in a hectic fever, he will probably meet with very few caſes wherein a conſiderable part of the pus will not fall to the bottom of the veſſel. It muſt, however, be acknowledged, that a good deal of the pus is ſupported on the ſurface, by means of the mucus that ſurrounds it: but never I ſuppoſe in ſuch a quantity, or at leaſt with ſuch an effect, as to prevent in moſt inſtances the depoſition of a part of the purulent matter.

What involves this ſubject in doubt and uncertainty is, that mucus as well as pus very frequently ſinks in the liquor, examples of which are to be met with every day; ſo that no poſitive proof can be deduced, from the ſuſpenſion or ſinking of theſe ſubſtances.

Some aſſiſtance is thought to be obtained from the colour of the matter, as mucus is moſt commonly white and tranſparent, while pus is generally greeniſh, yellow, or opake. Though this may be a very common occurrence, yet it cannot, on any account, be depended upon, as the natural mucus of the lungs is almoſt always of a dark and cineritious colour, and when preternaturally ſecerned, has been found to aſſume all the appearances, juſt now enumerated. Concluſions have likewiſe been drawn from their different degrees of conſiſtence: for mucus is moſt commonly, if not always, viſcid, coheſive, and fleaky; but, pus is arranged into circular maſſes, eaſily ſeparated into fragments, and its coheſion ſpeedily deſtroyed by agitation in water. It has been ſuppoſed, that the mixture of the ſubſtance coughed up, may throw ſome light on this ſubject; for, when a green or yellowiſh matter is ſurrounded with one more clear and tranſparent, the part more deeply tinged has been commonly conſidered as pus, while the remaining portion was looked upon as mucus alone. But, I imagine that the ſmalleſt conviction cannot ariſe from ſuch a ſuppoſition, as we can eaſily ſuppoſe, that a quantity of mucus by ſtagnation in the bronchii may appear different in conſiſtence and colour, from what is immediately excreted from the follicles themſelves; and there is little doubt, but ſuch an effect may be often produced by a violent fit of coughing: for not only the mucus that has lain ſtagnant for ſome time, will be thrown up, but likewiſe a quantity immediately from the excretory glands. In this way we account for the checkered aſpect of the mucus to be met with at times in pneumonic affections.

Some experiments inſtituted by the late ingenious Mr. Charles Darwin, are thought to diſtinguiſh pus from mucus, with a degree of certainty. This author alleges, that pus and mucus are equally well diſſolved by the vitriolic acid; but more ſpeedily the latter: if water be added to the ſolution of mucus, this becomes detached, and either floats on the ſurface, or, ſeparated into flocculi, is diffuſed through the liquor. But if water be poured upon a ſimilar ſolution of pus, this ſubſtance either ſinks to the bottom of the veſſel, or by a little agitation is ſo completely diffuſed, as to render the water uniformly turbid. The cauſtic fixed alkali employed in the ſame manner as the vitriolic acid, is ſaid to produce the ſame phænomena. As ſome doubts have been entertained of the truth and accuracy of theſe experiments; I thought it incumbent on me, in writing on the Phthiſis Pulmonalis, to repeat them with as much care and caution as poſſible, in order to find what faith they are entitled to, and what aſſiſtance they may afford in aſcertaining the diſeaſe.

I therefore procured a quantity of purulent matter, to which I added about its own weight of vitriolic acid, when an efferveſcence immediately took place. I found it neceſſary to ſtir the mixture with a feather, in order to bring about a more complete and intimate union of their parts. In a very ſhort ſpace of time the whole of the pus was diſſolved. I then poured ſome water on the ſolution, and examining it at different times, I ſaw no precipitation appear, till an hour and a quarter after the water had been added. The liquor then became ſomewhat turbid, and flocculi were diffuſed from top to *bottom*. Whenever I ſhook the vial in which this mixture was contained, it always grew more turbid than it was before, and after the agitation it underwent, I let it reſt for twenty-four hours, but it diſcovered no farther alteration. I made ſimilar experiments on mucus, which took up more time in diſſolving than the pus, and though left at reſt for the ſame length of time as the ſolution of pus, it appeared throughout clear and pellucid, except two or three very ſmall clouds (which were ſuſpended in the liquor, exactly analogous to what occurs in the urine, ſometimes diſcharged by patients labouring under continued fevers. What changes a ſolution of the cauſtic fixed alkali may produce on theſe ſubſtances, I cannot venture to determine; as I never put the matter to the teſt of experiment: but it is very probable, that the difference between the effects of the acid and alkali would not be very *conſiderable*. From what has been now delivered, it appears, that my experiments differ from thoſe of Mr. Darwin's, in ſome particulars: yet the variation that has occurred, is inſufficient to diſturb the following facts: that a ſolution of pus, by means of the vitriolic acid, which I always uſed in its concentrated ſtate, becomes turbid by the addition of water, and that a ſimilar ſolution of mucus treated exactly in the ſame way, undergoes no ſuch alteration.

The

The Cauſes of the Phthiſis Pulmonalis.

IT is univerſally admitted by Phyſicians, that the Conſumption of the Lungs, as well as many other diſeaſes of the human body, is propagated from parents to their offspring. The Antients were ſo fully confirmed in this opinion, that they looked upon the taint altogether indelible; not that a Conſumption was unavoidably the conſequence of ſuch a latent cauſe; but that there always lay concealed in the body a prediſpoſition capable of producing the diſeaſe, as ſoon as the neceſſary exciting cauſes exiſted.

This circumſtance is thought to be well illuſtrated, by remarking, that ſome people who were ſubject to a ſpitting of blood for many years, were never affected with the ſlighteſt phthiſical ſymptoms, while many others, in a ſhort time after the occurrence of the Hemoptyſis, laboured under a confirmed pulmonary conſumption. Several Phyſicians have conſidered the connection of the Phthiſis and Hemoptyſis to be ſo intimate, that they generally looked upon the former as the unavoidable conſequence of the latter, and that a ſanguine temperament was equally conſpicuous in the one as in the other. As this erroneous idea has had conſiderable influence on practitioners in conducting the cure of Phthiſis, it will be more than a matter of mere curioſity, to point out its fallacy.

From the experiments of Sir John Pringle and Mr. Gaber, it appears, that the ſerum of blood is the only part of it properly calculated for the formation of pus; that the craſſamentum of blood, or even a few red globules, mixed with a proportionably large quantity of ſerum, exhibits an appearance different from a real purulent ſubſtance. If we are to be governed by theſe facts, in explaining the origin of pus, very ſtrong doubts muſt occur in admitting the production of an ulcer from a ſimple hæmorrhagy. The lungs ſeem as well adapted to bring about ſuch a change in the red globules, as any other organ whatſoever: its lax cellular texture eaſily admits of the blood's ſtagnation when effuſed, and the conſtant agitation the lungs undergo, appears a probable means of forwarding the neceſſary proceſs.

But many facts and obſervations can be adduced, which prove incontestably that a Phthiſis, in conſequence of an Hemoptyſis, is not a common occurrence. To the ſuppreſſion of an evacuation of blood which had been eſtabliſhed a long time in the ſyſtem, as the hemorrhoidal or menſtrual flux, but more eſpecially the latter; the moſt common vicarious out-let is the organ of reſpiration, as a plethoric ſtate of the ſyſtem will be ſooner felt here than in any other viſcus. Similar effects have likewiſe been produced by the amputation of a large member. We every day ſee large quantities of blood thrown up by contuſions inflicted on the thorax. Men of ſedentary lives, who incline forwards during ſtudy, are frequently attacked with a ſpitting of blood: yet how rarely do we find a pulmonary Conſumption ſupervene. Even Van Swieten, himſelf, a ſtrenuous advocate for this doctrine, is nevertheleſs obliged to own, that he has known a large quantity of florid blood coughed up at intervals for ſeveral years, without ending in a Phthiſis Pulmonalis.

Indeed an ulceration in the Lungs is ſo ſeldom produced by an hemorrhagy, that ſeveral Phyſicians are of opinion, that a particular temperament or Phthiſical Diatheſis muſt concur with the Hemoptyſis, in generating the diſeaſe.

There is one circumſtance generally overlooked, which has, I think, miſled the greater part of writers on this ſubject. A Phthiſis Pulmonalis is ſeldom known to finiſh its courſe without a ſpitting of blood occurring in one period or other of it; if this diſcharge of blood ſhould happen to appear in an advanced ſtage of the diſeaſe, no ſenſible practitioner will ever imagine that the ulcer derived its origin from ſuch a ſource: but in an early ſtate, and before the diſorder is clearly marked, if an Hemoptyſis ſhews itſelf, it will require ſome attention to know whether we are to aſcribe the exiſtence of the ulcer to the hemorrhagy, or to tubercles. To attain this end, it will be always neceſſary to find out if the cough had ſubſiſted for any length of time, previous to the ſpitting of blood; for when this is the caſe, we may in general conclude, that tubercles are formed in the lungs. But, if on the contrary, the Hemoptyſis be antecedent to the cough, or follows ſhortly after the firſt attack of the coughing, we ought to attribute the ulcer to the influence of the hemorrhagy.

I am fully perſuaded, that many miſtakes have been committed on this ſubject.

As ſoon as Phyſicians perceived a ſpitting of blood come on, without the preſence of any hectic fever, and that this ſupervened in ſome time after, they immediately judged it to ariſe from the Hemoptyſis. Had they examined their patients attentively, they would have found in moſt caſes, that a cough ſubſiſted for a conſiderable time before the Hemoptyſis commenced. I have thus delivered my opinion, and I think it will admit of a ſatisfactory explanation. In the incipient ſtate of Phthiſis, the tubercles are commonly of a very ſmall ſize, attended with no uneaſineſs, except that of a ſlight irritating cough: but as the diſeaſe advances, theſe tumors increaſe in all dimenſions, and a degree of inflammation greater than they had before is ſuperadded. When they proceed thus far, the blood-veſſels of the lungs are ſtraitened in their capacities, at different parts, and thoſe that are free from compreſſion, muſt of courſe receive a larger quantity of red globules than they contained before: hence an over-diſtention takes place, and in conſequence thereof, a re-action in the diſtended veſſels, which continues until the congeſtion is removed by an effuſion of blood into the cellular texture or bronchiæ. As this hemorrhagic effort is confined to the veſſels of the lungs, and to theſe in part only, and appears not in conſequence of a general plethoric ſtate of the ſyſtem; the quantity of blood thrown up on this occaſion is commonly inconſiderable. This laſt circumſtance, I conſider as an additional proof of the doctrine I have endeavoured to eſtabliſh. On the whole, if practitioners will examine the matter attentively, they will ſeldom fall into miſtake or error on this ſubject.

I have thus endeavoured, from ſome reaſoning and facts, to overturn the common opinion, that a Phthiſis Pulmonalis was generally the effect of an hemorrhagy from the lungs; yet I would not willingly run into the oppoſite extreme, and ſay that ſuch an occurrence does never happen.

I am ſtrongly perſuaded it does, and will ſhortly attempt to prove it, though not in the uſual *manner*.

It hath before been remarked, that moſt Phyſicians, on ſeeing a diſcharge of blood from the lungs continue for a long time without ending in a Phthiſis, have with great plauſibility concluded, that a phthiſical temperament or Diatheſis muſt have concurred with the Hemoptyſis, in producing the diſeaſe. As early as the days of Galen, this opinion has been embraced, and is, I believe, at preſent adhered to by Phyſicians in general. This author, when ſpeaking of this ſubject, ſays, " non omne ſanguinis ſputum ſequentem habet puris expuitionem, ſed tantum id quod mali moris eſt." Many ſtrong objections may be raiſed againſt this idea. It is pretty generally agreed among Phyſicians, that an ulcer in the Lungs, following an Hemoptyſis, is much leſs malignant than one from tubercles: the former, by a proper treatment and regimen, very frequently admits of a cure, while the moſt powerful remedies are ineffectual in the latter. As this is really the caſe, we cannot on any account ſuppoſe that a Phthiſical prediſpoſition concurs in generating the ulcer from an hemorrhagy, as the ulcer would then be imbued with all that virulence ſo common to a Conſtitutional Phthiſis.

It is probable indeed, when the hemorrhagic ulcer (if I may be allowed the expreſſion) is of a malignant and incurable nature, that ſome fault or taint in the habit of body, imparts to the ulcer its noxious quality; but in no inſtance of a mild and favourable purulency can I admit of ſuch a ſuppoſition. In order to explain the formation of an abſceſs ſucceeding an Hemoptyſis; it will be neceſſary to attempt a diſa diſcuſſion of the following queſtion: Why does not the rupture of blood-veſſels on the internal ſurface of the noſe, anus, &c. produce an ulcer as well as the rupture of veſſels in the lungs? I would firſt have it obſerved, that, it is not in conſequence of the mere rupture of the veſſel itſelf, but of the quality, and perhaps the quantity, of the effuſed matter, that an ulcer ſupervenes. It is very improbable to ſuppoſe, that the burſting of a ſmall artery or more, could be followed with ſuch an effect; for as ſoon as the diſtended veſſels are relieved from the accumulation of blood, their extremities draw nearer to each other, on account of that property peculiar to muſcular parts. Even the elaſticity of the veſſels, conſidered as ſimple ſolids, will conduce to this end. Moreover, in many inſtances, a dilatation of the extremities of the veſſels only takes place, which may be readily ſuppoſed to diſappear as ſoon as the congeſtion in the veſſels is removed. In this manner, I would explain the frequent but innocent recurrence of an Epiſtaxis. The noſe, on account of its depending ſituation, is badly calculated for the retention and ſtagnation of the blood or its ſerum, ſo neceſſary to the formation of purulent matter: its blood-veſſels are thinly covered with the cellular texture (for a wiſe purpoſe) and the effuſed fluid, of courſe, readily breaks through its confines. It may be here objected, that as ill-conditioned ulcers and fiſtulæ are frequently known to ſucceed the Hemorrhoids, a ſimple rupture may be looked upon as the original cauſe. But this conjecture will little avail; for every ulcer or abſceſs in theſe parts, is evidently the effect of ſome previous tumor, whether hemorrhoidal or otherwiſe. I believe, if the moſt experienced Surgeons were examined on this ſubject, that they would give it as their opinion, that a tumour of ſome kind or other had always preceded the ulcer, when it came on ſpontaneouſly. Though the depending ſituation of the anus, as well as that of the noſe is unfavourable to the remora of the fluids in the contiguous parts: yet many other circumſtances concur to render the anus liable to very malignant ulcers. The cellular texture, towards the extremity of the rectum, appears perfectly well adapted to the reception of extravaſated fluids, and many cauſes could be mentioned, which accumulate the blood in the veſſels near the anus: When thus the foundation is laid, the fluids will proceed to a purulent ſtate, according to circumſtances. In general, the ulcers in theſe parts, are of a malignant quality, which ought not to be attributed to the vitiated nature of the effuſed fluid; but to the neglect of the patient, who ſeldom applies for any remedy, till a ſinuous ulcer is formed.

We now proceed to attempt the explication of an ulcer from an Hemoptyſis. It is generally ſuppoſed, and I believe with juſtice, that when blood is diſcharged ſpontaneouſly from the lungs it proceeds from a partial or general Plethora: the exertion of the veſſels conſequent to ſuch a ſtate of overfulneſs occaſions the blood to be poured out by Anaſtomoſis or rupture. What effect the latter has in the production of an abſceſs, has already been pretty fully diſcuſſed, and needs no farther conſideration here. As it appears from experiments, that pure, unmixed pus, is formed from ſerum alone, and that the mixture of red globules totally changes its aſpect, and gives it a ſanious appearance: we muſt conclude, of courſe, that it is the ſerous part only, which is employed in the formation of purulent matter after an Hemoptyſis. To illuſtrate this, it may be obſerved, that the matter of an hemorrhagic ulcer in the lungs, is not different in conſiſtence or colour from the common ſpecies affecting this organ. While the plethoric ſtate of the ſyſtem is particularly exerted in the lungs, the hemorrhagic diſpoſition of the veſſels may at one time or other, pour into the bronchiæ or cellular texture, a quantity of ſerum, diveſted of the craſſamentum; and ſuch an occurrence may account for the ſubſequent ſtate of purulency. There is little doubt, but ſuch an effuſion of ſerum alone, often takes place in the lungs, as well as in other parts, when an uncommon effort or Plethora of the veſſels ſubſiſts; for we often ſee a ſerous diſcharge from the anus, named by Phyſicians, the Hemorrhois Alba, continue for a length of time without any mixture of the coloured part of the fluids. It appears extremely probable, that in every inſtance of hemorrhagy, eſtabliſhed for ſome time in the ſyſtem, a ſerous diſcharge precedes and follows the effuſion of red globules; even the latter may be totally excluded by the profuſeneſs of the former. Before a complete Anaſtamoſis or rupture takes place, a degree of dilatation, capable of allowing an eſcape to the ſerous part of the maſs, occurs in the extremities of the blood-veſſels; but the ſame cauſe continuing ſtill to operate, the remaining viſcid part is diſcharged through the wound: but as ſoon as the exciting cauſe has ceaſed to act, the veſſels gradually collapſe, until they totally exclude the coloured parts, and afford an exit to the colourleſs, through their contracted orifices. As the lungs, from their ſtructure, are ſo well calculated for the reception of fluids convertible into pus, and as ſuch fluids are often effuſed, in conſequence of an hemorrhagy; it is ſomewhat extraordinary, that an abſceſs from ſuch a cauſe does not more frequently occur. But when the fluid is poured into the Bronchiæ, the exquiſite ſenſibility of the internal ſurface of the lungs is a formidable barrier to ſuch an alteration in the effuſed fluids: the irritation given to this membrane by fluids, not deſtined for it, brings on a fit of coughing, which diſcharges the matter through the Trachea Arteria.

When ſuch an effect has taken place, every approach towards the production of an ulcer will be totally defeated; but if by ſome cauſe or other, the ſerum happens to be detained in the Bronchiæ, or lodged in the interſtices of the veſſels, long enough to undergo a proper degree of fermentation, an abſceſs will be produced, conſiſting of laudable, purulent matter. The train of reaſoning juſt now purſued, will, I hope, not only explain why an Hemoptyſis is ſo ſeldom followed by ulceration; but alſo its innocence in compariſon to *that from tubercles.*

Moſt writers, in enumerating the predispoſing cauſes of Phthiſis, have commonly enranked a narrow capacity of the thorax among the number. It is a difficult matter to exclude ſuch a cauſe from having ſome ſhare in giving riſe to this diſeaſe, as it very commonly attacks people whoſe cheſts are contracted. Moreover, when the body is arriving at its full extenſion and growth, and the equilibrium† between the ſyſtem of the aorta and pulmonary veſſels begins to be adjuſted, a plethoric ſtate of the veſſels of the lungs may be ſuppoſed to follow from the mal-conformation of the ſurrounding parts. But as an Hemoptyſis appears to be the direct conſequence of this Plethora ad ſpatium, ſo the faulty ſtructure of the thorax probably operates no farther in producing the Phthiſis, than by favouring the accumulation of blood in the lungs, and thereby inducing an hemorrhagic effort in that viſcus. Some imagine that an ill-formed thorax, independently of an hemorrhagy or hereditary taint, may have the effect of producing tubercles and obſtructions, by rendering the paſſage of the blood through the lungs laborious.

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† Vid. Cullen's Firſt Lines.

Can ſuch an effuſion of ſerum be produced by a plethora in the lungs, without hemorrhagy, ſo as to terminate in a confirmed Phthiſis Pulmonalis? It has been confirmed by many obſervations, that thoſe perſons moſt liable to be attacked with ulcers in the lungs, are the deſcendants of ſcrophulous parents: they often ſhew manifeſt ſigns of ſcrophula in their infancy, and in riper years, they frequently feel the direful effects of this noxious poiſon. The habit of body peculiar to the ſcrophulous, is tolerably well known, by certain external marks or ſigns: but as ſome ſimilarity ſubſiſts between it, and the ſanguine temperament, it will be neceſſary to draw a line of diſtinction between them. Thoſe perſons in whom the former occurs, have more of the melancholic aſpect than the florid or purely ſanguine, their countenances have a wan, pallid, and decayed appearance, their veins are preternaturally large, and their upper lips tumid and protuberant: a weak and flaccid ſtate of the ſolids are inſeparably connected with this habit of body, and an unuſual torpor and inactivity in the employments of life are perceptible in every action. On the other hand, thoſe who are ſubject to Hemoptyſis Epiſtaxis, &c. (in whom the ſanguine temperament is exquiſitely formed) have roſy and florid complexions, quick and lively parts, chearfulneſs of temper, and an early acuteneſs of genius and underſtanding: their fibres are remarkably irritable, and eaſily thrown into inordinate motions, called ſpaſmodic diſeaſes. Though we can, in many inſtances, diſtinctly mark a difference in the temperaments juſt now mentioned; yet, by accurate obſervation, we will ſometimes find them combined in the ſame perſon. I ſhould not have dwelt ſo minutely on this ſubject, as it has been handled by other writers, but that it leads me to a very important diſtinction in the cure of ſome ſpecies of Phthiſis, which I intend to proſecute in another part *of this treatiſe.*

The various conditions of the atmoſphere, with reſpect to gravity, elaſticity, humidity, &c. have certainly a very powerful influence on the lungs of living animals. In a ſtate of perfect health, the human frame may for ſome time endure ſuch changes, without receiving any material injury: but if any of them take place in a remarkable degree, the body can ſcarcely eſcape with impunity. A cold, cloudy, and humid air, has probably no ſmall ſhare in depoſiting the ſeeds of a Phthiſis Pulmonalis : we very well know that the inhabitants of warm climates are not near ſo much ſubject to complaints of the lungs, as thoſe of Great Britain and Ireland, and this is perhaps to be attributed to the copious and free perſpiration kept up in the former by the warmth of the *Atmoſphere.*

It appears from experiments, that the human body is capable of reſiſting a degree of cold, far below the freezing point, without ſuffering any injury from ſuppreſſed perſpiration; it has even been proved, experimentally, that cold, when not intenſe, rather favours the expulſion of the perſpirable matter: but if moiſture be combined with the cold, the lungs will in general, ſuffer from ſuch an union. This is ſeemingly well exemplified, by turning our attention to the diſeaſes of the rude, and unpoliſhed Northern inhabitants. The better part of theſe, as in primitive times, exiſt in a ſtate of nature, and are obliged to ſupport themſelves by fiſhing and hunting. The exerciſe they uſe in procuring their ſuſtenance, is an effectual means of throwing off the fluids from the internal parts, and of protecting the body from many diſorders: but, there is ſtill another circumſtance very much in their favour, that the cold to which they are expoſed, though very intenſe, is notwithſtanding, free from moiſture. Their atmoſphere is commonly clear, ſerene and elaſtic, and they ſcarcely know any diſeaſe, except what is naturally to be expected from ſuch a climate; ſuch as rheumatiſms, inflammatory fevers, and others, depending on a rigidity of the blood-veſſels, and moving fibres. On the other hand, our Northern Iſlands, are continually ſurrounded with water, exhaling into the air, and rendering it cloudy and moiſt; ſo that the unfortunate ſojourner, is always expoſed to the influence of a very dangerous agent. This may, in ſome meaſure, explain why the inhabitants of Great Britain and Ireland are ſo ſubject to the conſumption of the lungs, and that in conſequence thereof, it has given riſe to the proverbial phraſe of Morbus Anglicus, made uſe of *by foreigners.*

What effects the groſs and luxurious living of the ſubjects may have in generating an acrimony or cachexy, capable of propagating the diſeaſe, is not an eaſy matter to determine: but, it appears probable enough, that ſuch a diet has no ſmall ſhare in laying the foundation of this diſeaſe, as well as many others; though it would perhaps be abſurd to form a conjecture of its *modus operandi.*

It muſt be admitted, that this or any other manner of accounting for the riſe of tubercles in the lungs, is defective in ſeveral points; and in fact, many arguments could be advanced, which would effectually overthrow this theoretical ſyſtem. There are many parts of the globe, whoſe inhabitants are not very ſubject to the Phthiſis, who are, nevertheleſs, as much expoſed to cold and moiſture, as the inhabitants of theſe united countries. But, though we cannot ſatisfactorily explain in what manner the diſeaſe originates, or cannot ſuppoſe, that cold and moiſture could account for the phænomenon; yet, we may declare, with confidence, that ſuch cauſes are very powerful in urging on the fatal ſtage of the diſorder; and that it will always be a very difficult matter to accompliſh a cure, while the patient is acted upon by a moiſt and cloudy atmoſphere.

This conſideration ſhould rouſe the attention of Phyſicians, and urge them on to inveſtigate the receſſes of nature, in order to find out ſome medicine of ſufficient efficacy to attack the cauſe of the diſorder.

Though unwilling to admit the healing virtues of drugs in ſeveral diſeaſes, independently of a proper and well-conducted regimen; yet, here I contend, that in many inſtances, no regimen or mode of living can be deviſed, capable of eradicating effectually, the noxious poiſon, without the aſſiſtance of medicine. It is true indeed, that there are ſome ſpecies of Phthiſis, where medicines would neither be proper or admiſſible; but I am fully perſuaded, that the greater number, eſpecially thoſe which ariſe from tubercles, will never admit of a complete cure, till ſome remedy is diſcovered, powerful enough to remove theſe almoſt unconquerable obſtructions.

Many diſorders, as the gout and others, brought on by indolence and intemperance, and depending on cauſes that operate deciſively, on all the moving powers of the machine, can never be radically cured by medicine alone, whoſe effects are often tranſitory and inefficacious: for, it is an eſtabliſhed principle, in the practice of Phyſic, that it is abſolutely neceſſary for the cure of any diſeaſe, firſt, to remove the exciting cauſes, if they happen to exiſt; ſo temperance, and a proper management of exerciſe, muſt be a great and important object in the cure of ſuch diſeaſes. On the other hand, the Phthiſis Pulmonalis, is an affection, very often depending on a particular kind of acrimony, or habit of body, equally pernicious to the temperate and debauched; and occurring at a period of life, when dangerous cauſes have ſeldom been applied, and even when they are, have not ſo much influence as might be expected; ſo that ſome effectual remedy ſeems as requiſite for counteracting the virus of the Phthiſis in many caſes, as that of the Scrophula or Lues Venerea.

Several uſeleſs and inactive drugs, which were formerly held in great eſteem by Phyſicians, are now with juſtice expelled from the Materia Medica; and a ſimplicity of preſcription is commendably introduced into the Practice of Phyſic. This appears agreeable to reaſon, and to the Pathology of the human body; but I ſuppoſe not more ſo, than to the palates of patients in general. People afflicted with diſorders, are always anxious to get rid of them, with as few medicines, and as little inconvenience as poſſible; and the Phyſician who ſeldom preſcribes in compliance with the patient's wiſhes, is held in the greateſt eſteem; yet by indulging their fancies, or through ignorance of the diſorder, practitioners very often neglect the application of the moſt active remedies. It would have been a fortunate circumſtance for mankind, that ſufficient attention had been paid in pointing out thoſe diſorders, wherein the cure ſhould principally reſt on the power of medicines; it would have prevented that abſurd, and ill-judged method of ſearching after Noſtrums in ſeveral complaints, where they could be attended with little advantage; and conſequently directed Phyſicians, to a proper ſelection and adminiſtration of them in others, where they would probably meet with *ſucceſs*.

But, let us return to the ſubject from this *digreſſion*.

Beſides the cauſes already mentioned, medical writers have taken notice of ſome others. The pernicious practice of binding up infants (ſhortly after they are born) with rollers, has been with juſtice condemned. By theſe means the ribs become depreſſed, and the cavity of the thorax, in conſequence, is rendered conſiderably narrower. At ſuch an early period, the bones are in a cartilaginous and unoſſified ſtate, of courſe very little reſiſtance can be made to the continual preſſure of theſe bandages. Even when the proceſs of oſſification is complete; grown up females are ſtill ſubject to the diſadvantages of wearing ſtays, which may probably operate in a ſimilar, though not in ſo dangerous a manner, as the bandages; for the different parts of the body are daily undergoing a ſtate of elongation and extenſion, by the impetus of the fluids, and the yielding of the ſolid parts, till the arrival of the Acmè: ſo that any machinery which counteracts this proceſs, may in many inſtances prove very deſtructive.

From the foregoing obſervations, it will readily appear, that by a continued preſſure around the thorax, a diſpoſition to Hemoptyſis may be frequently induced, which might at length be productive of Phthiſis. It has been ſuppoſed, and with ſome appearance of probability, that an inactive and ſedentary life is a great means of laying the foundation of Phthiſis. This ſeems the more plauſible, as women, who in general uſe very little exerciſe, are moſt commonly the victims of this diſorder. But, though we cannot reject, with abſolute certainty, the admiſſion and influence of ſuch a cauſe; yet, if we conſider what an immenſe number of people, in all parts of the globe eſcape with impunity, who lead lives of extreme indolence and luxury; it would be unphiloſophical to to conclude, that a Phthiſis could originate from ſuch a ſource, independently of any other auxiliary. It will be more rational to ſay, when a tendency to the diſeaſe has already pre-exiſted, that a want of exerciſe may accelerate its progreſs.

As this diſeaſe is allowed to be hereditary, it will be neceſſary to trace, if poſſible, the cauſes of ſuch a phænomenon. In ſeveral writers on the Phthiſis, we find expreſſions made uſe of which have no fixed or determinate idea attached to them, ſuch as a natural prediſpoſition, a Phthiſical tendency, and others of a ſimilar nature. When ſuch terms occur without further elucidation, they are ſure to involve the ſubject in great obſcurity; in many diſorders they do not admit of a ſatisfactory explanation; but in the one before us, the matter does not appear altogether ſo difficult.

By the above terms we are to underſtand, that the ſeeds of the Phthiſis are tranſmitted by means of certain cauſes from parents to their offspring. One of the moſt remarkable of theſe cauſes is the Scrophula, which is well known to be an hereditary diſeaſe, and to have often laid the foundation of a Phthiſis Pulmonalis. I cannot diſcover any other cauſe that might be ſuppoſed to operate in a ſimilar manner, except that of an originally deformed thorax, which may in proceſs of time generate a Phthiſis by producing tubercles in the lungs, or by favouring the acceſſion of an Hemoptyſis. But as this deformity of the thorax may be brought on by cauſes peculiar to the conſtitution in which it occurs, it cannot probably, on that account, be ſo extenſively applied as the former. A Venereal taint communicated from the mother to the fœtus, may after birth, appear in the form of a Phthiſis;

ſis; but as ſuch a caſe, if it ſhould ever occur, is peculiar to infants, we cannot proſecute it farther. On the whole, there are but two hereditary ſources of this diſeaſe, one from a diminiſhed capacity of the thorax, and the other from a ſcrophulous taint. When it comes on from any other cauſe, it muſt be conſidered as an accidental occurrence.

The occaſional or exciting Cauſes.

WHEN an inflammation of the membrane inveſting the lungs is ſo violent, as not to admit of reſolution, a ſuppuration commonly takes place, and the purulent matter is either concealed in a cyſt, or bag, well known by the appellation of Vomica, or is diſcharged by expectoration, through the Aſpera Arteria. Sometimes it is ſaid to be abſorbed and thrown on ſome other part of the body; numberleſs examples of which are to be met with in medical writers. Another termination remains to be mentioned, which is very frequently as dangerous, if not more ſo than any of the former. I mean when the purulent matter breaks through its boundaries, and diſcharges itſelf into the cavity of the thorax, diſcovering the ſymptoms of a dropſy of the cheſt.

Inſtances have occurred of an expectoration of purulent matter following an inflammation of the lungs, accompanied with an exquiſitely formed hectic fever, which, however, ſpeedily diſappeared, as ſoon as the contents of the abſceſs were coughed up, and the patients, in a ſhort time after, returned to their ordinary ſtate of health and vigour. Even ſeveral obſervations have been made, which prove that an ulcer from pneumonic inflammation, is not generally followed by a Phthiſis Pulmonalis. But no conſideration whatſoever, ſhould prevent us from employing every means in our power, to obviate its noxious tendency; for though many examples of its favourable termination have been adduced, yet others are recorded, which demonſtrate its having often ended fatally; ſo that the greateſt prudence and precaution ſhould be uſed, and the diſeaſe treated as if the moſt imminent *danger was to be apprehended.*

The greater part of the ancient and modern Phyſicians have looked upon catarrhal affections as effectual cauſes in the production of Phthiſis Pulmonalis. "Duæ namque ſunt efus differentiæ;" ſays Galen, "una quidem ex capitis defluxionibus conſtat, altera vero quæ ex ipſis pulmonum affectibus ortum ducit, prorſus quidem ex cruentis ſputis, maximeque rupto vaſe, ſæpius vero et rheumate affecto viſcere, ob aliam quamdam, ex aliis partibus, non ex capite cauſam." That Galen meant by capitis defluxionibus, a catarrhal affection, there is not the ſmalleſt doubt: for when a morbid ſecretion of mucus took place in the lungs, the antient Phyſicians imagined that the Pituita deſcended from the brain, and took poſſeſſion of the part affected. In examining phthiſical patients, the greater part of them will inform you that their diſorder aroſe from cold; and in reality the application of cold is generally the exciting cauſe: this circumſtance has often probably miſled practitioners, and influenced them to treat the diſeaſe as a ſimple Catarrh, inſtead of an incipient Phthiſis. It is improbable to ſuppoſe, that a ſlight and tranſient affection of the mucous follicles of the Bronchii, not attended with much inflammation, could produce a permanent ulcer. A common catarrh chiefly conſiſts in a preternatural ſecretion of mucus from the glands above-mentioned, is in general a ſlight and tranſitory affection, and readily yields to a proper regimen: ſupporting the perſpiration and promoting the circulation at the ſurface, will in moſt caſes perform a cure.

But in that ſpecies of epidemic catarrh, known by the appellation of Influenza, and in other ſpecies of the diſorder, attended with ſome degree of Pneumonic affection, a Phthiſis may be produced independently of any prediſpoſition. The ſubſiſting inflammation may occaſion ſuch an effuſion of ſerum, as will readily lay the foundation of an abſceſs. I am even fully convinced, that the frequent repetition of an ordinary catarrh, may in length of time, terminate in a confirmed Phthiſis, by firſt producing tubercles.

In every catarrhal affection, ſome degree of obſtruction does certainly occupy the Bronchial glands; the ſtricture acroſs the cheſt, the hoarſeneſs of the voice, and the conſtant, irritating cough without expectoration on the firſt days of the diſeaſe, prove this to a demonſtration. But if by nature or the aſſiſtance of medicine, the ſymptoms begin to abate, the expectoration goes on freely, the tightneſs acroſs the cheſt is removed, and every ſign of the reſolution of obſtructed parts appears manifeſt. In this manner two or three attacks of a catarrh, may have a favourable termination, until by the repeated application of cold, the obſtructions become at length irreſolvable. Thus the baſis of a confirmed Phthiſis may be laid, different from one ariſing ſpontaneouſly, and to be treated with different and perhaps oppoſite remedies.

It is very well known, that a Phthiſis Pulmonalis has frequently followed diſeaſes imbued with a particular kind of acrimony, as the meaſles and ſmall-pox, but more eſpecially the former; as the lungs ſeem to ſuffer remarkably in this diſorder. It is not eaſy to determine whether the acrid matter of theſe exanthemata operate by producing tubercles, or by leaving ſome inflammatory affection after them in the lungs. Diſſections alone can remove theſe doubts. The glands in different parts of the body have certainly been obſtructed by both the infectious matters, juſt now mentioned: ſo that it is not improbable to ſuppoſe, that the glands of the lungs ſhould undergo ſimilar changes from the ſame cauſes; eſpecially as it is well known that their virulence, in many inſtances, is particularly exerted on this organ. But as the Phthiſis is more frequently brought on by the morbillous than by the variolous matter, on account of the inflammation that attacks the lungs in the former; and as the eyes are frequently ſo injured by a ſimilar affection from the meaſles, as to end in a total loſs of viſion: it will not be abſurd to conclude, that when a Phthiſis comes on in conſequence of theſe diſeaſes, a local inflammatory affection, ſimilar to that attending Pleuriſy, has generally had a conſiderable ſhare in the production of the ulcer. Whether this be the caſe or no, it avails little, as the treatment I intend to propoſe, will be the ſame in all caſes of Phthiſis ariſing from theſe eruptive fevers.

The virus of the venereal diſeaſe is ſaid to have frequently given origin to Phthiſis; for as this poiſon appears to act principally on the Lymphatic ſyſtem, ſo by occaſioning obſtructions in the lungs, analogous to theſe in the groin, and in other parts of the body; an ulcer of a malignant nature may readily enſue. Whether we do or do not admit the exiſtence of lymphatic glands in the lungs, we ſtill ſuppoſe, that the venereal virus may generate ulcers in theſe organs.

Some diſſections, executed under the direction of the late Mr. De Haen, would lead to an opinion, that pus abſorbed from different parts of the body, and transferred to the lungs, may be productive of Phthiſis. Few, however, will be apt to give credit to ſuch conjectures. What are the effects of eruptive diſorders without fever, in the formation of tubercles? many of them, if not all, muſt certainly be attributed to ſome alteration in the action of the cutaneous veſſels, of courſe cannot on any account be deemed active agents in generating tubercles. It may be alleged that though no acrimony ſubſiſted in the maſs of blood, during the external appearance of theſe eruptions; yet, by length of time, ſuch an acrid matter may be produced, which, when abſorbed and conveyed to the lungs, may there give riſe to obſtructions. This, however, is merely a conjecture, unſupported by facts or experience. We every day ſee ulcers of the moſt inveterate nature, diſcharging an acrid and corroſive ſubſtance, conſuming the muſcles to a conſiderable depth, without the ſlighteſt ſymptom of a Phthiſis Pulmonalis.

It has long ſince been remarked, and is confirmed by daily experience, that Calculi are often to be met with in the lungs, as well as in other viſcera. On diſſection, ſubſtances of a ſtrong or cretaceous nature have been found, at different times, in the lungs, though no ulcer could then be diſcovered: however, they are ſaid to bring on a Phthiſis Pulmonalis, ſometimes as dangerous as that from other cauſes.† On ſimilar principles, I ſuppoſe, depends that ſpecies of Phthiſis to which certain tradeſmen are ſaid to be incident from the nature of their employments, ſeveral examples of which are to be met with in the writings of Ramazini and others. The particles of duſt, iron, ſtones, and ſuch like, which they are ſuppoſed, unavoidably, to inhale during their different occupations, are thought to give riſe *to the diſeaſe*.

I can readily conceive how chalky concretions, thrown out of the circulation, and lodged in the Bronchiæ or cellular texture of the lungs, by irritating theſe parts, may bring on ſuch a degree of inflammation as will end in ſuppuration, and at length in a confirmed Phthiſis: but I can not well underſtand how particles of duſt, iron, &c. can get ſuch a ready admittance into this organ. The exquiſitely irritable ſtate of the Bronchiæ, is wiſely calculated by nature, for guarding againſt accidents

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† Cullen's Firſt Lines, vol. ii. p. 384. Edin. Edit. 1784.

of this kind; for when any acrid ſubſtance is drawn in from the air, or falls down from the cavity of the noſtrils, ſo as to get into the beginning of the trachea, a fit of coughing is immediately excited, and continues, till the offending cauſe is effectually removed. Even ſubſtances, the moſt mild and inoffenſive in nature, will not gain admiſſion, when ſuch a powerful oppoſition is made againſt them. From reaſoning on the ſubject in this manner, we cannot admit ſuch cauſes to be capable of themſelves to produce a Phthiſis: however, when tubercles have already pre-exiſted, the conſtant irritation given to the lungs by theſe ſubſtances may be a means of forwarding their maturation. Hence, if a Phthiſis ſhould happen to any of theſe Artificers, we may improperly aſcribe it to the cauſes juſt now related; while, in fact, the complaint might have been originally conſtitutional. Indeed, every day's experience corroborates the doctrine I have propoſed; for we find that Stone-cutters, Smiths, Flax-dreſſers, and others, are not more ſubject to phthiſical complaints than thoſe of a different laborious occupation; even people of better rank are more commonly afflicted with this diſeaſe, than ſuch tradeſmen; ſo that, on the whole, it will require further teſtimony, before we ſubſcribe to the ſentiments of Ramazini and Morgani, on this ſubject.

There are certain acrimonies ſuppoſed to be generated in the courſe of ſome diſeaſes, as in the ſcurvy, putrid fevers, and others, which may be thought (on ſimilar principles, with other acrid humours) a probable means of forming tubercles. But there is no direct or poſitive evidence that ſuch acrimonies do exiſt in theſe diſeaſes; even admitting they did, they will not account for the production of the Phthiſis: for in explaining the operation of the ſmall-pox and meaſles, it appeared that an inflammatory affection of the lungs, rather than the direct action of the acrimonies in generating tubercles, was the cauſe of the Phthiſis ſupervening. However, this argument, would by no means invalidate the reaſoning that might be adopted on the other ſide of the queſtion: for the venereal virus has been found to produce tubercles, though no inflammatory fever accompanied it. But the moſt convincing proof that can be adduced is, that we find no caſes on record which prove that the acrimonies juſt now mentioned (if ſuch there be) ever brought on a Phthiſis Pulmonalis.

The Aſthma has been commonly enranked by medical writers, among the exciting cauſes of Phthiſis.

The difficult tranſmiſſion of the blood through the lungs, that obtains in every fit of Spaſmodic Aſthma, and the violence that is offered to the organ itſelf from the inordinate action which it labours under, may be thought to operate deciſively, in producing tubercles and obſtructions. To a perſon who takes this view of the ſubject, ſuch a termination may appear perfectly natural. But this mode of reaſoning is merely conjectural, and ought not to influence us in matters of ſuch importance. Some facts, it is true, have been advanced in ſupport of the idea, that Aſthma was ſometimes the cauſe of Phthiſis: but the concluſions that were drawn from ſuch facts, are in my opinion totally fallacious. When practitioners ſaw a Phthiſis Pulmonalis ſucceed an Aſthma, they immediately judged that the former was occaſioned by the latter; but if this was really the caſe, how comes it to paſs, that the combination of Aſthma and Phthiſis is not more frequent than we generally find it to be? Surely, if the Aſthma alone was powerful enough to produce it, we ought, at leaſt, in moſt caſes of Aſthma, to find in one ſtage or other a Phthiſis ſupervene. But every day's experience proves the contrary to be a fact. It is well known to Phyſicians, that an Aſthma can ſubſiſt for a number of years, without ending in a Phthiſis Pulmonalis, and in fact we every day behold living witneſſes of this aſſertion; even numberleſs inſtances could be adduced of Aſthmatic people living to a very advanced age, without ſhewing the ſlighteſt ſymptom of an ulcer in the lungs. What concluſion ought we to draw from ſuch conſiderations? the moſt rational one is, that the

Phthiſis Pulmonalis is not the inevitable, or even the natural conſequence of a ſpaſmodic Aſthma: and that it ſeldom or never follows, except in ſuch perſons as have been previouſly affected with tubercles. The diſeaſe which may in general be ſuppoſed to follow the Aſthma, is the Hydrothorax. The reſiſtance that the blood meets with in its paſſage through the lungs during an Aſthmatic fit, will have the effect of throwing it back on the heart and great veſſels annexed to it; whereby, in length of time, an Aneuriſm may be brought on, which is one of the moſt common and moſt effectual cauſes of the Hydrothorax. Even the retardation of the blood in the lungs, will account for the phænomenon.

An increaſed exhalation or diminiſhed abſorption occurs in other parts of the body, from ſimilar cauſes; and I ſee no reaſon why the ſame effect ſhould not be produced in the lungs, by the interruption given to the flowing of the blood from the arteries into the veins. On the whole, the more we conſider the nature of the Phthiſis Pulmonalis, the more readily we will reject the many efficient cauſes of it enumerated by authors; for theſe cauſes I apprehend operate chiefly in forwarding the inflammation, and conſequent purulency of the tubercles: ſo that the diſeaſe is perhaps in the greater number of caſes conſtitutional, and originates from a ſcrophulous taint.

The Scrophula is undoubtedly an hereditary diſeaſe, and this is ſo univerſally admitted by Phyſicians of obſervation, that it requires no argument to ſupport the opinion.

However, it is probable that ſcrophulous tumors and ulcers do ſometimes come on in conſequence of a certain accidental ſtate of cachexy, independently of any fault on the ſide of the parents; and, I think, I have met with ſuch caſes.

I have endeavoured, when treating of the pre-diſpoſing cauſes of Phthiſis, to point out the peculiar temperament of Scrophula; it would be therefore ſuperfluous to inſiſt any farther on that ſubject.

It has long ſince been obſerved, and is confirmed by daily experience, that thoſe perſons are moſt liable to ulcers in their lungs, who were affected with ſcrophulous ſwellings in their younger days.

The acute and experienced Ratcliffe has obſerved, that the greater part of the Conſumptions of England, and other cold countries, were of the ſcrophulous kind. This opinion receives additional confirmation, by conſidering that children of ſcrophulous parents are often attacked with the Phthiſis; and that, during its courſe, ſcrophulous tumors or ulcers appear externally. The ingenious Dr. Cullen, has often found the Tabes Meſenterica,* (a dangerous ſcrophulous affection) accompanying the Phthiſis Pulmonalis. Moreover, the advancement of ſcrophulous tumors towards ſuppuration, is analogous to that of tubercles in the lungs. In the former caſe, they often continue for months, and even for years, without coming to ſuppuration;

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* Vid. Cullen's Firſt Lines. vol. ii. p. 390. Edin. Edit. 1784.

ration; and when this takes place, the proceſs is commonly carried on in ſucceſſion, one advancing to maturity after the other, until the whole are at length in a ſtate of ulceration. In the latter, the ſame inactive, indolent ſtate is quite perceptible: they often remain in this condition for a long time, diſcoverable by no ſymptom except by the ſcrophulous temperament, and a ſhort troubleſome cough that conſtantly attends them.

It is not at all uncommon to ſee ſcrophulous ſwellings diſappear about the time that the ſyſtem approaches its Acmé; and when the different parts of the body begin to acquire a proper degree of vigour. Why ſuch a favourable termination ſhould not take place in the tubercles of the lungs, will plainly appear, by conſidering the ſituation and functions of theſe important organs. The alternate ſtates of dilatation and collapſe, to which they are unavoidably ſubjected, will probably keep up a neverfailing irritation: any unuſual impetus of the blood will certainly have a ſimilar effect: for, though the numberleſs diviſions and branches of the Pulmonary artery, may be a means of ſupporting an equilibrium between the lungs and the reſt of the body; yet the ſmall extent of ſurface which the lungs have, in compariſon to the whole of the body beſides, muſt render the force of the blood more impetuous and inflammatory in them, than in any other part of the machine. This will eſpecially be the caſe, if a plethoric ſtate of the ſyſtem ſhould happen to be preſent.

Some other cauſes, which deſerve attention, remain to be mentioned, ſuch as the ſuppreſſion of the uſual perſpiration, and its conſequent determination to the internal parts; Catarrhal affections produced from what is commonly called catching cold, and the retroceſſion of various eruptive diſorders. In ſhort, whoever conſiders all the diſadvantages that a perſon who has tubercles in his lungs labours under, will judge it to be a very difficult matter for him to eſcape free from Phthiſis at one time or other.

It often happens, that at the very period, or ſhortly after theſe ſcrophulous tumors begin to diſappear in the external parts, the lungs begin to ſuffer from their virulence; for, though by the healing of the ulcers on the ſurface, and other circumſtances, we may imagine, that the conſtitution has thrown off the diſorder; yet we often find the contrary by experience, and that frequently the moſt invincible attack is reſerved for the organs of reſpiration.

There are certainly no glandular tumors ariſing from an acrimony diffuſed through the maſs of blood, that remain for ſuch a length of time in a ſtate of indolence, as the Scrophulous. Buboes, originating from the venereal virus, and from other infectious poiſons, may continue for a long time inactive, without coming to ſuppuration: but, ſurely there never was an inſtance of their continuing for ſuch a number of years as theſe of the Scrophula. Steatomatous ſwellings, and different kinds of tumors, which contain matter of various conſiſtence and colour, may ſubſiſt for a whole life, without producing much inconvenience or danger: but all theſe depend on topical cauſes, as on ſome change in the action of the veſſels of the part affected; and hence are to be conſidered only as topical affections.

The indolent diſpoſition of Scrophulous tumors appears to be a ſtrong preſumptive proof, that no acrimony or humour of any kind is concerned in their formation. For when glandular ſwellings appear in conſequence of an acrimony diffuſed through the general maſs, as that of the Plague, Small-pox, Meaſles, &c. they ſpeedily tend to ſuppuration: at leaſt they never remain for ſuch a length of time as years, in a ſtate of indolence. Hereditary diſorders, depending on an acrimonous humour, ſhew themſelves immediately at the birth of the child, or ſhortly after by a characteriſtic ulcer, as that of the Lues Venerea: but thoſe that ariſe from a depraved ſtate of ſolids, as the Gout, Epilepſy, Mania, and many others, are reſerved for a later period. The Scrophula ſeldom makes its appearance till after the third or fourth year, and

Scrophula

is to be met with in every period from this to manhood: there have even been inſtances of its occurring frequently at the age of twenty and upwards: hence, if any acrimony was in fault it would in all probability diſcover itſelf more early in life. Moreover, the ill-habit of body that is inſeparably connected with it, and the peculiarity of temperament attending it, ſeem to me corroborating proofs of its being merely a diſeaſe of the ſolids.

Various conjectures have been formed, with reſpect to the nature and ſeat of tubercles. One is of opinion, that they are obſtucted lymphatic glands; another contends that the bronchial glands are affected; while a third rejects both, and attributes them to ſome other cauſe. Among ſuch a variety of ſentiments, I cannot attempt to decide with any degree of certainty, not having had an opportunity of ſeeing a ſufficient number of Conſumptive ſubjects diſſected. I ſhall, notwithſtanding, offer a few remarks on this matter, which may probably elucidate it in ſome degree. As no lymphatic glands have yet been certainly diſcovered in the lungs; a natural, and ſeemingly concluſive inference may be drawn, that theſe glands cannot poſſibly be the reſidence of the tubercles. But ſtill this circumſtance does not prove to a certainty, that ſuch glands are wanting, or that the diſeaſe is not ſeated in them. Several important branches of the lymphatic ſyſtem lay undiſcovered till very lately; and many years have not elapſed, ſince the peculiar œconomy and functions of the lymphatics have been evolved. No lymphatic abſorbents have been found in the human brain, though from their exiſtence in the brains of fiſhes, and in moſt parts of the human body where abſorption is required, we may conclude, from a ſtriking analogy, that they exiſt in the human brain, though Anatomiſts have not been ſo fortunate as to diſcover them. I would farther have it obſerved, that as the Scrophula is allowed to be a diſeaſe of the Lymphatic ſyſtem, and that tubercles have been ſo very frequently found in the lungs, while ſcrophulous,

lous, lymphatic ſwellings appeared externally; ſo that both were conſidered the ſame diſeaſe; ſuch tubercles may be looked upon as affections of the conglobate lymphatic glands.

With reſpect to the opinion of the Bronchial glands being ſo far obſtructed, as at length, to end in a tuberculous ſtate, I have delivered my ſentiments before, when treating of the influence of Catarrhal affections, in producing a Phthiſis.

Cure of Phthiſis Pulmonalis.

SYSTEMATIC writers on the cure of Phthiſis, have very ſpeciouſly laid down ſeveral indications: Such as to bring the ulcer to maturity, and evacuate the pus as ſpeedily as poſſible. To guard the blood againſt the virulence of the purulent matter. To cleanſe and heal the ulcer with medicines adapted to that purpoſe. And laſtly, to adminiſter food of ſuch a quality as requires not much force, or expence of powers to aſſimilate it to the conſtitution. Such have been the curative indications planned out for this diſeaſe, by very reputable authorities:[*] yet, from the preſent improved ſtate of the Theory and Practice of Phyſic, no modern Phyſician would adopt ſuch a ſyſtem. Not to talk of the idea of endeavouring to oheriſh the ulcer, in order to forward its ſuppuration, and have the matter diſcharged by the Trachea: we are poſſeſſed of no medicines whatſoever, adapted to the healing of the ulcer in a part ſo far removed from their ſphere of action as the lungs: even when they are applied to the ulcer itſelf externally, we find little or none of that all-healing virtue commonly *aſcribed to them.*

The laſt of theſe indications ſeems to be the moſt rational; though I will venture to aſſert hereafter, that the regimen Phyſicians have generally employed for anſwering ſuch an intention was not always proper. The moſt eligible method (if we had medicines calculated to anſwer ſuch an indication) would be, to attempt, in moſt caſes the removal of tubercles and obſtructions,

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[*] Vid. Boerhaave, and Van Swieten.

tions, by remedies endued with a deobſtruent power: but in the preſent ſtate of things, it may be ſuppoſed, that we cannot venture to lay down ſuch an indication, as we are not poſſeſſed of medicines powerful enough to fulfil it, and accordingly, we find few Phyſicians paying ſufficient attention to this ſubject. The better part of them, if not all, will allow that the Phthiſis Pulmonalis, in moſt inſtances, ariſes from tubercles; yet, not many of them have properly exerted themſelves in endeavouring to remove them. The object, at leaſt, ſhould be conſpicuouſly diſplayed, however difficult it may be to reach it: exhibited in this manner, as a flag of invitation, the mind is urged on to attack the cauſe of the diſorder. Phyſicians ſhould therefore never loſe ſight of ſo important a conſideration in the cure of Phthiſis, as the removal of obſtructions; for every medicine or regimen, founded on any other principle, will often operate ſolely as a Palliative.

Our next endeavour ſhould be to prevent the inflammation and conſequent ſuppuration of the tubercles : to correct the ill habit of body, which frequently attends this ſpecies of tumor, and obviate by a ſuitable diet, the effects of the hectic fever. Laſtly, in the caſe of a mere topical inflammation and ſimple, purulent ulcer, we are to direct our attention to the local diſorder, without conſidering it as the conſequence of any acrimony or fault of the conſtitution : firſt, by abating the inflammation, which is always a means of ſupporting the fever and purulent diſcharge ; and next, to guard againſt the emaciation of the body by a well-conducted regimen. Theſe different plans ſhall be followed, though not in the order they are mentioned, in the ſucceeding part of this enquiry.

As blood-letting is ſo powerful, in diminiſhing the activity and force of the ſanguiferous ſyſtem, and in removing any general or topical inflammation, it may be looked upon as a valuable remedy in the cure of Phthiſis Pulmonalis. Accordingly, we find it practiſed by Phyſicians of no inconſiderable degree of merit and reputation. It is not only common for them to make uſe of one or two bleedings in the beginning of the diſorder, but alſo to have them repeated at proper intervals, on the ſuppoſition that they would remove the inflammation ſubſiſting in the lungs, by diminiſhing the Plethoric ſtate of the ſyſtem. But there are many facts and obſervations on record which prove, that frequent blood-letting rather increaſes than diminiſhes the Plethora of the body; and holding this as a fact, I ſhall take a different view of this important ſubject.

Few Phyſicians, when they preſcribe veneſection, conſider what length of time the conſtitution may require in reſtoring a quantity of red globules, adequate to what was loſt by the bleeding; indeed ſuch a conſideration, in many caſes, would lead to a feeble and timid practice, as in diſorders attended with acute inflammation, where a free and unreſerved uſe of the Lancet is ſo often neceſſary, and where the neglect of ſuch a remedy, for a few days, may be attended with very ſerious conſequences. But this can ſeldom be the caſe with the Phthiſis in its incipient ſtate, where no immediate danger can be apprehended, and where a reſtraint on the lancet, inſtead of being injurious to the patient, may rather, at times, conduce to his recovery.

Some experiments have been ſet on foot, which are ſaid to determine how long a certain quantity of blood taken from the general maſs, will require to be reinſtated: but, I am of opinion, that there muſt be a fallacy in the concluſion drawn from any experiment on this ſubject. Though we can readily find by ſtatical experiments, what length of time the body will require to arrive at the weight it had previous to the blood-letting: yet, can we declare, with any certainty, that the red globules on which the ſecretions depend are perfectly reſtored? I will venture to ſay, we cannot. We know, from experience and obſervation, that the emaciation produced by evacuations of any kind (on condition that it has not proceeded ſo far, as to bring on ſome other diſorder) will diſappear by proper management, in a ſhort time after the diſcharge has ceaſed. The Plethoric ſtate of the body will be ſpeedily regained by the adminiſtration of a diet containing a large portion of nutritious matter, which is at the ſame time eaſily ſubdued by the digeſtive powers. But ſurely, it is not reaſonable to ſuppoſe, that the red globules can be ſo ſuddenly formed, and that they poſſeſs that degree of conſiſtence and coheſion ſo commonly attendant on them in a vigorous and healthful condition of the body. Accordingly, no ſmall degree of weakneſs and relaxation, with a remarkable paleneſs of the countenance, remain for a long time after any conſiderable loſs of blood, whether drawn at once, or at intervals; though the former plenitude of the veſſels was renewed, and the body acquired its uſual bulk and magnitude.

As the fulneſs and tenſion of the veſſels depend on the quantity of red globules and gluten inherent in the maſs, ſo by removing theſe in any large quantity, we diminiſh the activity of the arteries, and of courſe the excretory veſſels detached from them. By theſe means, the former plethora of the veſſels will be ſpeedily reſtored after blood-letting, if the aliment be taken in its uſual quantity and quality.* However, we are not to conclude from theſe phænomena, that the due proportion of red globules and gluten are added to the maſs, though the veſſels have acquired their uſual fulneſs; for the inactive ſtate of the excretories not allowing a ready eſcape to the colourleſs part of the fluids, will occaſion an over-fulneſs in the arteries before ſufficient time is given for the formation of the red globules. The ſymptoms of paleneſs, &c. juſt now enumerated, prove clearly, that the red globules are not perfectly moulded; and the Hydropic Diatheſis, ſo common to thoſe who have been frequently blooded, even when they have regained their ordinary plumpneſs and obeſity, are additional proofs of the doctrine here inculcated.

It is extremely probable, that the proceſs of ſanguification is carried on in a direct ratio to the vigour of the conſtitution in general; for, we ſee in the Chloroſis, and in many diſorders where the vital powers are diminiſhed, that the roſy and florid colour of the countenance diſappears inſenſibly, owing to the red globules and gluten not being added to the circulating maſs in the uſual quantity. The ſame colour and habit of body frequently occurs in the firſt ſtage of the Phthiſis, and is to be attributed to ſimilar cauſes, as to thoſe of the Chloroſis. There is a delicacy of conſtitution, at times, ſo predominant in ſome conſumptive perſons, that very little general evacuation can be ventured upon; though, at the ſame time, it would require ſome diſcernment and ſkill to diſtinguiſh the diſeaſe from an ordinary catarrh, except by the viſible decline of the body. The wan and pallid countenance, the averſion to any employment or exerciſe that requires the ſmalleſt exertion; the ceſſation of the menſtrual flux in the female ſex, all of them very often occurring at an early period of the diſeaſe, are convincing proofs, how hazardous it is to attempt a cure by the evacuation of frequent blood-letting. To moſt perſons, eſpecially to thoſe in whom evident ſigns of a Plethora exiſt, two or three bleedings may be advantageous; but no theory, no preſumption of experience, nor even the ſpecious pretext of authority, can give ſanction to its frequent repetition. We are by no means capable of judging how long the ſyſtem may be in regaining the loſs ſuſtained by bleeding in any caſe: but the matter is ſtill more dubious in a beginning Conſumption, where the frame is gradually declining, and of courſe the power of converting the aliment into blood is every day diminiſhing. Moreover, from the experiments of the very ingenious Mr. John Hunter, a ſtrong preſumption ariſes, that a portion of the living principle of animals, is inherent in the blood. Admitting his reaſoning on this ſubject well founded, and concluſive (which I think moſt perſons will, who have peruſed it carefully), it will require no ſtrength of imagination to allege, with ſome degree of confidence, that the operation of blood-letting, frequently repeated, will diſcharge, with the ſtream, a conſiderable part of the living principle:

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* Vid. Cullen's Firſt Lines, vol. ii. p. 411. Edin. Edit. 1784.

ſo that, "vitamque cum ſanguine fudit," will be as effectually produced, in length of time, by the wound of a Lancet, when often repeated, as by the moſt extenſive wound inflicted on any of Virgil's *Heroes*.

On the whole, whatever view we take of this ſubject, repeated blood-letting cannot be practiſed in any ſtage of the Phthiſis with advantage to the Patient, or honour to the Practitioner: but, on the contrary, the one will have his diſorder aggravated, and the other muſt run the riſque of loſing his reputation.

We ſhall next turn our attention to a very intereſting and important part of this ſubject, to wit, to the neceſſary rules for conducting the diet in this diſeaſe.

The greater part of medical writers, from Hippocrates, down to the preſent period, have conſidered a milk and vegetable diet as indiſpenſably neceſſary for the cure of every ſpecies of Phthiſis, as blood-letting for an inflammation of the lungs. This may appear the more extraordinary,

dinary, as the principles upon which they founded their practice, were as different and contradictory as any two ſubſtances in nature.

However, in the eye of a Philoſopher, this diſcordance between the theory and practice may be ſufficient to add weight and ſtability to the latter, and overthrow any oppoſition made againſt it: let the theory on which it was founded be ever ſo vague and fantaſtic; for it may be alleged, that notwithſtanding there were many falſe opinions and conjectures formed about the cauſe of the diſeaſe, that the ſucceſs always attending the milk diet, tranſmitted the practice unaltered to poſterity.

The method of treating ſome diſorders, has been uniformly the ſame in all ages and in all countries, though many various and different theories have been ſet up, from time to time, concerning their nature and cauſes; yet experience, a uſeful and valuable guide in the practice of Phyſic, has inconteſtably proved the propriety of the treatment. For example, blood-letting has been invariably employed in the cure of Pleuriſy by moſt Phyſicians, except by the Chymical ſect: this practice ſtill keeps its ground among the moderns, and will always hold good, while Phyſic and Philoſophy exiſt. This is the mode of reaſoning that might be adduced in favour of a milk and vegetable diet, without inveſtigating its effects on the human body, either in a ſtate of health or diſeaſe.

In any complaint wherein a particular treatment is found by experience to be ſucceſsful, and is confirmed by the general teſtimony of Phyſicians, a perſon might readily ſubſcribe to ſuch authorities, though he never had an opportunity of putting the matter to a trial; but if he found a diſorder baffling every effort of medical ingenuity and ſkill, and not yielding to any medicine or regimen that has ever been propoſed, he may turn ſceptic and totally reject the experience and teſtimonies of Phyſicians on this ſubject; and conclude, that either the doctrines they have eſtabliſhed,

bliſhed, are erroneous, their methods of cure ill-judged, or that both are perhaps in fault, and deſerve an equal cenſure. He might alſo reaſon with himſelf in this manner:

The Conſumption of the Lungs is well known, in general, to be a fatal diſeaſe, and this idea has ſo univerſally ſpread itſelf among all ranks of people, that they entertain little or no hopes of a cure from the advice of a Phyſician, if they are fully convinced of its exiſtence. The general carnage it commits under the eyes of the moſt celebrated in the profeſſion, the accelerated progreſs it aſſumes towards mortality by the common curative means, raiſe inſuperable doubts with me, if we are to credit the exaggerated accounts of cures being performed by the uſe of a milk and *vegetable diet.*

Theſe arguments, though ſeemingly plauſible, are ſtill very fallacious: for though the Conſumption of the Lungs is, in general, a fatal diſeaſe, after it has taken deep root; yet there is little doubt that a rigorous abſtinence from animal food, entered upon at an early period, has reſcued many a perſon from impending ruin. But, as this practice has, in my opinion, been extended beyond its proper limits, I ſhall take a view of the arguments that have been or may be advanced in its favour, and endeavour to prove that they are not ſufficiently ſtrong to exclude the admiſſion of animal food in certain caſes. As this is a ſubject of very great importance, it will be proper to give it a full and ample diſcuſſion.

The effects that the Antients, together with many of the Moderns, have expected from a milk and vegetable diet may be comprehended in what follows:

All the nutrition of the body, in the form of chyle, is directly ſent from the left ſubclavian vein to the right ventricle of the heart; from thence it flows through the Pulmonary artery immediately to the lungs, to undergo the changes neceſſary for the ſupport and maintenance of the conſtitution. As the lungs are the firſt viſcera to which this fluid is ſubjected, the greater part of Phyſiologiſts, even thoſe of modern times, have conſidered them as the principal, if not the ſole organs of ſanguification; and hence an opinion has been adopted by ſeveral, that if they ſhould happen to be obſtructed by tubercles or otherwiſe, the body muſt of courſe inſenſibly decay. Moreover, when the lungs are oppreſſed by tubercles, or corroded by malignant ulcers, they cannot poſſibly have ſufficient action or force to aſſimilate a quantity of nutrition adequate to the neceſſities of the œconomy: hence, that ſpecies of aliment which requires very little exertion of the digeſtive powers to ſubdue it, ſhould be made uſe of in preference to any other nutritious ſubſtance; and milk is ſaid to anſwer this intention completely. But ſeveral Phyſicians perceiving that dyſpeptic ſymptoms had generally accompanied the liberal uſe of cows milk, have ſubſtituted in its place, another kind, containing a ſmaller portion of oily and caſeous matter, and this is chiefly the milk of mares, aſſes, and ſome others. The whey of any of them has always been deemed proper and uſeful. Many other advantages are thought to reſult from the adminiſtration of milk; ſuch as defending the parts from the acrimony of the ulcer, by its mild and lubricating qualities, counteracting the tendency of the fluids to putrefaction, by its antiſeptic powers, allaying the febrile heat, and retarding the inflammatory progreſs of the tubercles or ulcers. When ſuch extraordinary advantages are expected to ariſe from this diet, it may readily be thought that a ſcrupulous abſtinence from animal food, has been rigorouſly enjoined in every ſpecies, and in every ſtage of the Conſumption.

We have now enumerated the different good effects which have been generally ſaid to reſult from the exhibition of a milk diet, and they ſhall be accordingly noticed; the objections that have, or poſſibly can be made to the partial admiſſion of animal food will be alſo anſwered.

I would firſt have it obſerved, that there is no direct or poſitive evidence of the lungs being the engines of ſanguification.

The chyle after being acted upon by the right ventricle of the heart with conſiderable force, is impelled with great velocity through the different branches of the Pulmonary artery, without undergoing any uncommon degree of attrition from the action of theſe veſſels. The ſwiftneſs with which the blood moves through the lungs, will perhaps retard, rather than accelerate this proceſs; for, if the lungs were ever ſo well calculated for bringing about the neceſſary change in the chyle, yet it is ſubjected to their action for ſuch a ſhort ſpace of time, that its progreſs towards ſanguification cannot be very much promoted.

It is extremely improbable to ſuppoſe, that any one viſcus is alone concerned in forming the red globules; and I cannot ſee how far the lungs are entitled to ſuch a pre-eminence from their functions, or from thoſe of the veſſels pervading them. The veſſels of this organ, I ſuppoſe, are governed by the ſame laws as thoſe of the reſt of the body; and as to any advantage that may ariſe from the continual expanding

ing and ſubſiding of the viſcus itſelf, it muſt be very *inconſiderable*.

Any determinate portion of chyle, in circulating through the lungs, cannot poſſibly receive much agitation or compreſſion from their peculiar mode of action; as reſpiration is not often performed during the time that a certain quantity of blood is paſſing from the right to the left ventricle of the heart. I think it more conſonant to Philoſophy, and to the general laws of the œconomy to conclude, that every red artery and vein conſpires to effectuate ſo elaborate a transformation. We ſee from what has been delivered in page 84, et ſequentia, what a long time the Conſtitution requires to reſtore any conſiderable quantity of blood loſt by Veneſection or otherwiſe; when, if the lungs were principally concerned in regenerating it, the proceſs would be more ſpeedily effected: for in many inſtances, the lungs perform their functions with as much force and vigour as ever; yet, every external appearance declares the blood to be in a diſſolved and imperfect ſtate in the veſſels for many days, and even weeks after the evacuation.

The circumſtance of the chyle being firſt ſubjected to the action of the lungs, can add no confirmation to this doctrine. The ſerous and lymphatic humours after performing their offices, and being abſorbed from the different cavities of the body, obſerve the ſame laws with reſpect to their circulation. There is little doubt alſo, but that the ſemen itſelf is taken up by the abſorbents, and if it circulates with the reſt of the fluids, which we muſt believe, from ſome facts related by Dr. Haller, it has no other paſſage to get into the red circulating ſtream, except by that which is common to the lymph, chyle and others. It cannot poſſibly be alleged here, that theſe ſecretions are imperfect in their nature, and that they ſtand in need of the lungs aſſiſtance to qualify them for their different purpoſes. They have already undergone what changes were neceſſary for the offices they were intended to perform; ſo that any remora in the receptacles or cavities they were lodged in, longer than was requiſite for diſcharging their duties, would be attended with very pernicious conſequences. It appears a very wiſe and beneficent intention of nature, to have theſe ſecreted fluids brought back to the general maſs, in order to avoid as much as poſſible, the diſorders that would inevitably ariſe from their accumulation. Had the Thoracic duct terminated in the Aorta, inſtead of the Subclavian vein, in order that the chyle might be acted upon by the reſt of the body before it arrived at the Lungs, it would have totally defeated the ſimplicity with which this ſyſtem is conducted, and introduced a complex manner, which is always incompatible with the method that nature makes uſe of in her operations. Then we would have one duct terminating in the Subclavian vein, which appears in a manner unavoidable, at leaſt it ſeems the moſt proper place for receiving the lymph of the upper parts, and the other emptying itſelf into the Aorta. But how much more conſiſtent and beautiful are matters in their preſent ſituation: inſtead of two being employed, we find only one, anſwering equally well, if not better, the purpoſes of both. On the whole, it is a matter of little conſequence how the chyle gets admittance into the maſs of blood, as it will be acted upon by the veſſels of the whole ſyſtem in a ſhort time after its entrance.

The ſubject that next in order merits our attention, is the cauſe or cauſes of the emaciation that takes place in the conſumption. We have before obſerved that this gradual waſte of the body, was formerly attributed to the want of the aſſimilating power in the Lungs from obſtructions and tubercles. But there is little doubt that obſtructions may ſubſiſt in the Lungs for a length of time, without bringing on any obſervable degree of emaciation; this I apprehend to be frequently the caſe before the tubercles begin to inflame or diſcharge any purulent matter; and, in fact, they have remained in an indolent ſtate for many years, while at the ſame time, no ſigns of decay or emaciation appeared. It is true, there is very often an uncommon degree of delicacy to be ſeen in the countenances of Phthiſical patients, in the firſt ſtage of the diſorder; but this is to be aſcribed to a particular temperament, or to an accelerated pulſe, which ſometimes ſhews itſelf very early, rather than to any waſte occaſioned by the obſtruction of tubercles.

It has been ſuppoſed, and I imagine on a very juſt foundation, that an abſorption of oil from the cellular texture takes place in every fever, for the purpoſe of covering and correcting any acrimony that may be introduced in the beginning, or generated during its continuance.† In every inſtance of a Phthiſis Pulmonalis, a fever is always preſent, and perhaps the epithet Hectic, is not improperly annexed to it: for, though exacerbations are generally formed in the noon and evening; yet, through the whole courſe of the diſeaſe, the pulſe is quicker than is compatible with a ſtate of health. This frequency of pulſe alone, will account for the emaciation that takes place in the

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† Vid. Cullen's Firſt Lines, vol. iv. p. 194. Edin. Edit. 1784.

Conſumption; but ſome other circumſtances ought to be probably noticed. The ſweatings that often attend this diſeaſe, by diſſipating the fluids, and of courſe occaſioning a diminution of the bulk of the body, may be thought to have a remarkable influence: but, as in many inſtances, little or no ſweating occurs in Phthiſis, while at the ſame time, the emaciation goes on as rapidly as if ſuch a cauſe had exiſted; we may reaſonably ſuppoſe, that the abſorption of oil, from the cellular ſubſtance, by means of the acrimony diffuſed all over the ſyſtem, is the principal agent in reducing the bulk and ſize of the body. The numberleſs examples of emaciation, ſupervening ulcers, of different denominations, both external and internal; when the matter is taken up by the abſorbents, afford, at leaſt, a very ſtrong preſumption for forming ſuch a concluſion.

The idea of milk being ſooner ſubdued by the digeſtive organs, and more eaſily aſſimilated to the Conſtitution than any food entirely animal, may, at firſt ſight, appear very plauſible. The common argument that has been advanced, is, that as milk has already undergone all the proceſſes of digeſtion in the animal from which it is taken; it ought, therefore, to be the more eaſily concocted, and aſſimilated by the conſtitution in the human frame. This doctrine may hold good in ſome particular inſtances, but it can never be generally applied.

The greater part of Viviparous animals live on the milk of their parents, for ſome time after they leave the Uterus, though the food which they are to ſubſiſt on at a certain period, be different and oppoſite in the ſame claſs. Thus ſome of them live on vegetable, others on animal food, and a mixture of both ſeems beſt adapted to the human race. Nature has undoubtedly a very benevolent intention in view, in appointing a milk diet ſo univerſally to the young of many ſpecies: it certainly is a very nutritious fluid, from the quantity of oleaginous matter it has in its compoſition, and from its conſiſtence, and from being a ſecretion of the parents, ſeems very well calculated for the maintenance of young animals. I am willing to admit, that milk was deſigned by nature for the young brood who live on it, as being a ſpecies of aliment eaſier of digeſtion than any other food that could be adminiſtered to them. However, it appears a little extraordinary, that the oviparous animals ſhould live on the ſame food immediately when they are hatched, that they uſe in a more advanced period: ſo that nature does not ſeem as ſolicitous in procuring them food of eaſy ſolution, as thoſe of the other claſs of animals; at leaſt we may ſay conſiſtently, that ſhe does not think it neceſſary. If milk be a food of ſuch eaſy digeſtion, I cannot well conceive, why there ſhould be ſo much attention paid in aſſigning it to the young of one claſs of animals, while another claſs is totally neglected in this particular. Nature has certainly ſome other object in view, beſides the food's digeſtion, elſe, why this marked predilection in favour of one animal more than another? We cannot give any reaſon why ſeveral of the young of many ſpecies, live partly on animal food in their earlier days, while they are totally confined to a vegetable diet in their riper years; which is the caſe with the cow, the ſheep, the aſs, and many others.

Very few, I ſuppoſe, entertain any doubts of an animal matter being one of the neceſſary conſtituent parts of milk; and, as few can probably explain, why animal food ſhould be well adapted to a young, and not to an aged conſtitution. However deficient we may be, in aſcertaining with preciſion, the final cauſes here, we muſt notwithſtanding declare, that as milk is the kind of aliment deſigned by nature, for the ſuſtenance of a numerous offſpring, it is of courſe the diet that is beſt ſuited to their conſtitutions. But its being the moſt ſuitable diet for a certain age, does not neceſſarily lead to a concluſion, that this is the caſe at a more diſtant period; and that like cauſes ſhould produce the like effects; when the body is in a ſtate of health, as well as in a ſtate of diſorder.

Nothing is more common than to ſee children labouring under dyſpeptic ſymptoms, from the continued uſe of milk; for when a loſs of tone occurs in their ſtomachs, an exceſs of acidity takes place, which is always diſagreeable, and oftentimes very dangerous. The milk is coagulated, and frequently thrown up in this indigeſted ſtate by vomiting: hence, Phyſicians find it neceſſary to wean the infant before the uſual time, or render the ſuck more Alkaleſcent, by increaſing the nurſes allowance of animal food. A ſmall portion of animal food given to the infant at intervals, will often be found more effectual for removing the acidity in the ſtomach, than the moſt powerful abſorbent in the Materia Medica. Even in this languid and debilitated ſtate of the ſtomach, nobody, I ſuppoſe, will attempt to ſay, that milk is more eaſily digeſted, and converted into the proper nouriſhment for the conſtitution, than any other nutritious ſubſtance: the precipitation of the caſeous part of the milk, and the frequent recurrence of vomiting, clearly demonſtrate, that the digeſtive proceſs is not properly conducted; and that the food which has the effect of increaſing the tone of the ſtomach and counteracting the morbid acidity at the ſame time, is beſt calculated for ſuch a diſeaſe, and is abſolutely the moſt eaſily conquered and aſſimilated by the powers of the œconony.

This reaſoning can, in many inſtances, be extended with propriety, to people of riper years. There are ſeveral of theſe in a robuſt ſtate of health, with whom milk, in its entire ſtate will not agree; from its diſpoſition to produce acidity, and other dyſpeptic ſymptoms. In Phthiſical patients, ſuch a phænomenon may be ſuppoſed to occur very readily, on account of the general ſtate of weakneſs and inanition: and accordingly, we find that milk is very often rejected by their ſtomachs; particularly in the advanced ſtage of the diſorder. It is true, that, ſeveral methods may, and have been propoſed, for obviating ſuch an effect, and ſometimes with ſucceſs: but, ſtill this circumſtance cannot poſſibly invalidate the arguments we have advanced, of milk being badly digeſted by theſe Valetudinarians.

The greater part of writers on the Conſumption, have conſidered a milk diet particularly indicated from its efficacy, in correcting the tendency of the fluids to putrefaction. It cannot be denied, but milk is leſs ſeptic than any food entirely animal; and if vegetables, and the farinacea be joined with it, a diet may be compoſed in this manner, which appears a probable means of retarding a putreſcent proceſs in the fluids, when ſuch a diſpoſition occurs. But nothing can be more unphiloſophical than to apply remedies for certain cauſes or effects, which never had any exiſtence. In every inſtance of a putreſcent ſtate of the fluids, certain ſymptoms, moſt commonly, if not always appear, which determine with a degree of probability, the preſence of ſuch a cauſe, as an hemorrhagy from different parts of the body, without the concurrence of an inflammatory affection, effuſions of blood, or ſerum under the cutile; a gangrene of particular parts, and the diſſolved appearance of the blood, when drawn by veneſection.†

Theſe are undoubtedly the ſigns, whereby we form an opinion of the tendency to putrefaction in the fluids, and ſurely, no Phyſician will attempt to ſay, that they are ever to be met with in Phthiſis, or ever originate from ſuch a ſource as the ulcer that uſually affects the lungs, excluſively of any other cauſe. The fætor of the breath, ſo frequently occurring in this diſorder, might have given riſe to this doctrine: but this exhalation proceeds directly from the ulcer itſelf, and is by no means the conſequence of any general depravation of the fluids; of courſe, it cannot be adduced as a ſupport to this doctrine. It may alſo be alleged, that as the ulcer is of a putrid nature, and as all putrid ſubſtances have the effect of promoting putrefaction, when added to fluids capable of ſuch a change; ſo the purulent matter of the ulcer ought neceſſarily to prove a ferment to the blood, and bring on its diſſolution. This is certainly the beſt argument that could be advanced on the ſubject; but notwithſtanding its plauſibility an unanſwerable objection can be oppoſed to it, to wit, that the Conſumption is never attended with a diſſolution of the blood: for, by examining the caſe minutely, no ſigns of putreſcency do ever appear. The fever that accompanies it, is always of the inflammatory kind, not reſembling in any degree the putrid ſpecies: the ſymptoms are not near ſo malignant in the one as in the other, nor the vital or natural functions ſo violently attacked. The fever of the former ſeems to ariſe from the ſtimulating acrimony of the ulcer, and operates like other acrid matters in increaſing the action of the heart and arteries: but the acrimony of the latter acts with deciſive influence in deſtroying the vital principle, and inſtead of raiſing the pulſe, generally tends to weaken and depreſs it.

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† Cullen's Firſt Lines, vol. i. p. 73. Edin. Edit. 1784.

Whenever a matter called putrid is introduced into the body, as in the Plague, Scurvy, and others; the diminution of the general powers of the body keeps pace with the progreſs of the putreſcency of the humours in the general maſs; but we often ſee the appetite continue unimpaired, even in the advanced ſtage of the Phthiſis, the intellectual faculties almoſt in their uſual condition, the mind elate with hope and confidence to the laſt extremity, and the final diſſolution protracted much longer than might have been expected from reaſoning on the ſubject. The patient emaciated to the utmoſt degree drags on a wretched exiſtence, ſo that every day appears to be his laſt: yet the fatal ſtroke is often warded off for months, in ſuch a ſituation. The fat, in which the plumpneſs of the body conſiſts, is exhauſted, and the ſkin and bones appear the only ſad remains; yet the action of the muſcles is, in proportion, very little diminiſhed.

Van Swieten relates the caſe of a muſician, who played on the Harpſichord with great dexterity, the day before his death, and moved his fingers with as much activity as ever.

Moreover, when death comes on, it does not happen from any immediate affection of the moving powers of the machine, acted upon by ſome virus or poiſon, but from a general emaciation, and an injury offered to the organization of a ſingle viſcus. Indeed it would ſeem, that the operation of the acrimony in the Phthiſis, was principally exerted on the cellular texture (which it effectually conſumes by degrees) and very little on the other parts. From theſe conſiderations, we totally reject the application of a milk diet, with reſpect to its utility in correcting the tendency of the fluids to putrefaction: though from thence it ſhould not be inferred, that it is either a dangerous or a uſeleſs remedy. I think that milk may have its advantages, and I believe it is the only remedy, if it agrees with the patient, and when combined with the Farinacea, that can be employed with any probability of ſucceſs, in certain ſpecies and in certain ſtages of the comſumption. It is a fluid that contains no ſmall portion of nutritious matter, and eſpecially of that quality which increaſes the bulk and plumpneſs of the body, in its nature mild and emollient, and deſtitute of any acrid or irritating ingredient. Another advantage, perhaps attending it, conſiſts in involving the acrimony diffuſed all over the body, and in defending the parts from its virulence: the ſignal ſucceſs to be met with from taking a large quantity of mild, freſh broths in the ſcurvy, ſeems to corroborate this opinion. Beſides ſupplying the humours with an aliment of a very nouriſhing and invigorating quality, they are well adapted to protect the parts from the influence of the acrid matter, ſo predominant in this diſeaſe.

Theſe obſervations would lead to an opinion, that though acrimony and putreſcency did always accompany the Conſumption, a quantity of animal food, under proper reſtrictions, may ſtill be given to ſome Phthiſical patients, with ſafety and advantage. But this ſubject we cannot proſecute here, as it will be diſcuſſed hereafter, when we have taken a ſlight view of the difference between animal and vegetable food.

There are, I think, many convincing proofs of animal food being more nutritious, and more effectual in promoting the plethoric ſtate of the body, than any diet conſiſting of milk, vegetables, or the Farinacea. This, I think, will admit of a demonſtration, without having any recourſe to the philoſophical analyſis of the different aliments taken in by animals. It is univerſally known, that ſuch of the human ſpecies as live entirely, or for the moſt part, on milk and vegetables, are always of a thin and meagre habit of body; while thoſe who live moſtly on animal food are generally plethoric. Even the degree of obeſity is proportional to the quantity of nutrition the food contains. Thus, the animal food of England has probably a greater tendency to produce obeſity, than the ſame ſpecies of food in Scotland; and that of Scotland, more than the ſame in France, and other Countries.

The reaſon that has been commonly aſſigned for animal food being more nutritious than vegetable, is, that, as the former contains a greater quantity of oil, which when ſecreted in the cellular texture, muſt of courſe increaſe the bulk thereof more effectually than the latter. This aſſertion ſeems ſomewhat doubtful, as the ſeeds of ſome vegetables do probably contain in a given quantity, a larger portion of oil than the ſame weight of animal food; ſo that animals who for the moſt part live on them, as ſwine, and others, may grow more corpulent than by living on animal food. But this can never be the caſe with the human ſpecies, as they ſeldom ſubſiſt on them, except through neceſſity; even if they did, I am firmly perſuaded that they would not become ſo plethoric as by living on animal food, though both were adminiſtered for experiment ſake, with the ſame ſpecific gravities. The vegetable oil, though covered with no ſmall portion of farinaceous matter, very mild in its nature, is never reliſhed, and ſeldom digeſted by the human ſtomach: an heavineſs is commonly felt after taking it, and acidity, with other ſymptoms of dyſpepſia, are ſeemingly its natural conſequences. On the other hand, the animal oil when taken in a moderate quantity (as extant in the food) is always grateful to the ſtomach, ſpeedily digeſted by it, except the body labours under ſome morbid affection. Animal food, by its agreeable ſtimulus, is very powerful in exciting the action of the moving fibres in general, and thoſe of the ſtomach in particular, whereby it aſſiſts this organ, in carrying on the proceſs of digeſtion: but the ſeeds of the vegetables, wherein the greateſt quantity of nutrition is ſuppoſed to reſide, are endued with no ſuch virtues, and rather retard than promote the powers of the different organs. There are, it is true, ſome vegetables which contain an oil more ſtimulant than that of animal food; but it is of the eſſential kind, whoſe ſtimulant effects are very tranſitory, and nutritious properties very inconſiderable.

Having now diſmiſſed this part of the ſubject, we will turn our attention to that kind of vegetable matter, which is more eſpecially the food of *man*.

It has been a diſputed point with Phyſicians, whether this aliment, or animal food, was the more perſpirable. Some experiments, to this purpoſe, have been inſtituted, which determine the point in favour of the latter; however, it muſt be owned that different circumſtances may at times preſent themſelves, which would hinder the experiments from being conducted with that exactneſs and preciſion, ſo neceſſary in a matter of this nature. A ſtate of inactivity in the organs of digeſtion and excretion, may ſo far operate, as to retain a more than ordinary quantity of a certain aliment, which would have been ſpeedily diſcharged from the body, if the organs had enjoyed their uſual powers and exertion. Hence, if vegetables ſhould happen to be taken, by way of experiment, in this condition of the body, their long retention would be made an inſtrument for proving that they are always detained longer in the body than animal food, and are of courſe leſs perſpirable. Further, the different degrees of appetite, during the courſe of the experiments, may be apt to lead to a fallacious concluſion. Thus, if a perſon takes a certain quantity of animal food, while he has a craving appetite, it will probably paſs off more readily by the excretories, than the ſame weight of vegetable matter would, when the deſire for eating is much leſs pungent.

The different ſtates of the Atmoſphere, with reſpect to heat and cold, on account of their action on the excretory veſſels of the ſkin, may have ſome influence in diſturbing the facts to be obſerved in the experiments; and undoubtedly the mode and degree of exerciſe ought not to be paſſed by unnoticed. All theſe circumſtances ſhould be carefully adhered to, during the courſe of the experiments, otherwiſe no ſatisfactory inference can be deduced from them. Though I have not had an opportunity of putting this matter to the teſt of experiment, I will, notwithſtanding, hazard a few conjectures.

I ſuppoſe it will be allowed me, that any aliment whatſoever will (cæteris paribus) be the ſooner diſcharged by the excretories, the more ſpeedily it is ſubdued by the organs of digeſtion; thus the ſeeds of ſome vegetables from the large proportion of viſcid indigeſtible oil inherent in them, will be concocted with more difficulty by the human ſtomach, and of courſe will require more time before they are excreted, than the ſame weight of animal matter that is not overcharged with this ingredient. Thus alſo we know, when the ſtomach enjoys a proper degree of tone and vigour, that a meal of vegetables is much ſooner digeſted than one of the moſt digeſtible animal food: from the appetite returning ſhortly after the one, and continuing ſatiated for a proportionably conſiderable time after the other. Any perſon who has made this experiment, with the neceſſary circumſtances, will find this fact incontrovertible.

Here we muſt ſuppoſe, that the vegetable matter has paſſed off ſooner than the animal, from conſidering the ſtate of the appetite, at a certain period after each has been ſwallowed.

The herbaceous part of vegetables, which is eſpecially the food of man, is expeditiouſly diſcharged by the different outlets, particularly by thoſe of the kidneys; and in this way, are thought to be extremely uſeful, in forwarding the cure of ſome diſorders, as the ſcurvy and others; even the ſeeds of ſome plants when they happen to have little or no oil in their compoſition, readily paſs off by theſe paſſages. This is the caſe with Barley, Oats, and ſome others. When they are adminiſtered to patients in the form of decoction, they are well known to have a diuretic power.

It may be ſuppoſed, that it is the elementary water alone which produces this diuretic effect; but, it is found by experience, that the farinaceous matters abovementioned, when intimately combined with water, promote its operation.

On the whole, by taking this view of the ſubject, it appears pretty evident, notwithſtanding the experiments that have been made to prove the contrary, that all the vegetables, as now uſed by the human ſpecies, are more perſpirable, and of courſe, leſs nutritious than any animal food, commonly taken in by way of aliment. This point being adjuſted, it remains now to determine how far animal food may be applied during the courſe of the Phthiſis Pulmonalis. After ſome reflexion on this ſubject, and a little experience in the diſeaſe, I cannot find the ſmalleſt foundation for rejecting entirely the uſe of animal food. The only arguments that can poſſibly be urged againſt its uſe, are the following, which appear to me inconcluſive.

Firſt, that it increaſes the plethoric ſtate of the body, and in conſequence thereof, the inflammatory nature of the tubercles or ulcers. Secondly, by its ſtimulant powers independently of its other properties, it urges on the tubercles to inflammation; and when the matter is formed, keeps up a conſtant drain from the ulcer, by its never failing ſtimulus and *irritation*.

In the firſt ſtage of the Conſumption, from the nature and cauſes of the diſorder, the habit of body and other circumſtances, it would be injudicious to the laſt degree, to ſuffer the patient to live with his uſual freedom on animal food, or even in moſt caſes to allow him a moderate portion of it: this would, in fact, be a great means of hurrying on that ſtage, which ought to be guarded againſt with the utmoſt diligence and attention. But, when the body is become exhauſted by the progreſs of the diſeaſe, when the fluids are evacuated in conſiderable quantities, when every muſcle and every fibre is materially impaired in its functions; muſt the ſame enervating practice be put in execution in every inſtance of the diſeaſe? ſurely, no authority, not even the preſumption of experience, can ſcarcely warrant ſo erroneous a doctrine.

Whenever it is found neceſſary in any diſeaſe to make uſe of general or topical evacuations, whether conducted in a rapid or gradual manner; there it is to be ſuppoſed, that the vital powers of the part, or of the body in general, are raiſed above the natural ſtandard, or in other words, an inflammatory diatheſis takes place. In ſuch caſes, the only rational indication that can preſent itſelf, is, to reduce the powers of the whole body, or of the particular part to the ordinary exerciſe of its functions. Every thing, whether in the way of medicine or regimen, that has the effect of diminiſhing the quantity and impetus of the fluids, and of leſſening the increaſed action of the ſolids is here admiſſible. But if the body is fallen far below its ſtandard, with reſpect to the quantity of its fluids and action of its ſolids; and if, at the ſame time, the ſubſiſting inflammation be not acute, but rather depends on a ſluggiſh and depraved habit of body; is it conſiſtent with the principles of philoſophy, or of common ſenſe to continue ſtill ſubſtracting from the machine, and employing the moſt effectual methods for increaſing the growing evil? Let us conſider for a moment, in what a condition the various ſecretions muſt be, when the animated frame is robbed of its nutritious fluids, the chief pabula that ſupports its exiſtence, without being occaſionally ſupplied with fluids to make up for the waſte. Will a little milk and vegetables reſtore to the flaccid ſcrophulous fibre its former coheſion and ſtrength, and to the living ſtream the proper degree and quantity of nutriment for the different purpoſes of the animal œconomy.

It is not an unpardonable miſtake in Phyſicians to allege, that they are counteracting a plethoric ſtate, and that the obviating ſuch a fulneſs, is the only method for correcting the malignity of the ulcer. But when the oppoſite ſtate to that of plethora occurs, to wit, ~~inattention,~~ inanition is it then neceſſary to co-operate with the diſeaſe, in forwarding a proceſs already too far advanced? Practitioners need not be very ſolicitous in combating the plethora of the body, in many phthiſical patients: time without the auxiliaries of medical art will effectuate that change. The conſtant frequency of pulſe, the diſcharge from the lungs, the general cachectic ſtate of the habit, together with the night ſweats, will ſhortly remove the plenitude and obeſity of the moſt bloated fabric.

Even before any ſymptom of a hectic fever diſcovers itſelf, evident marks of inanition are ſometimes diſplayed in the patients countenance. The marked inactivity in many functions, previous to this ſtage, point out demonſtratively, that the fluids are altered, both in quantity and quality, and that the ſolids are deprived of their ordinary tone and vigour.

Here it may be ſuppoſed that a partial plethora could occupy the lungs from a mal-conformation of the thorax and other cauſes, while ſigns of inanition and weakneſs appear all over the body. But, this conjecture is by no means probable. A plethoric ſtate of the lungs, eſpecially occurs about the time that the veſſels of the body have acquired their utmoſt extenſion and growth, and when a nice equilibrium ſubſiſts between the Aorta and Pulmonary artery, by a proper quantity of blood circulating in their canals; and particularly before any diſeaſe has ravaged the conſtitution. In ſuch a ſtate of the body a ſlight deformity in the thorax will readily produce a plethora in the lungs: but if the fluids are diſſipated in any conſiderable quantity by evacuations of any deſcription whatſoever, ſo that ſuch loſſes will not be replaced by an aliment of a nutritious quality; but, on the contrary, foſtered and promoted by the wretched pittance of a little milk and vegetables, which are ſeldom completely digeſted by the feeble and languid powers of the ſtomach: can a preternatural fulneſs in the veſſels of the lungs be ſuppoſed to take place? Can it take place in ſuch a condition of the body, when every faculty that ſupports it is on the decline? Can it exiſt, when the red globules themſelves, which give the veſſels their neceſſary fulneſs and tenſion, are beginning to vaniſh? Such queſtions will probably appear unanſwerable to every impartial reader; yet Practitioners in all ages and in all countries, have been induced, whether from theory or tradition, to treat the Conſumption of the Lungs in every ſtage and in every form, as if conſtantly attended with Plethora, and acute inflammation.

The different arguments now advanced in favour of adminiſtering animal food in the Phthiſis Pulmonalis, may be looked upon as declamatory; ſo that, for the ſatisfaction of my readers, and in juſtice to the ſubject under conſideration, I ſhall endeavour to take a more connected view of the matter. In order to attain this end, it will be proper, in my opinion, to aſcertain, if poſſible, the different ſpecies of the ulcers concerned in the production of this diſorder.

Tumors ariſing in glandular parts are more difficultly reſolved in general, than thoſe in membranous; the complicated ſtructure of the former may be ſuppoſed to admit of obſtructions more eaſily, but their diſcuſſion or maturation is longer protracted than in the latter. This is very frequently the caſe, even when the ſwelling is of the inflammatory kind, and where no ſpecies of acrimony can be ſuppoſed in fault. When ſcrophulous ſwellings ariſe in the conglobate, lymphatic glands, they frequently remain for a long time in a ſtate of indolence; and, though an abſceſs be formed in the end, and matter be diſcharged, it is ſeldom of a benign or laudable kind. It is no eaſy matter to aſcertain the cauſe of the obſtinacy and ill-conditioned nature of this ſpecies of ulcer: ſyphillitic tumors, by care and attention, will be brought to diſcharge a proper purulent matter, though they are ſeated in lymphatic glands; yet all the promoters of ſuppuration, that ingenuity and art can invent, will not, at times, have ſuch an effect on thoſe of the ſcrophula. The general laxity and flaccidity of the ſolids that inſeparably attend the latter, may be a means of preventing the ulcers from affording a laudable pus. Though it be difficult to exclude this ſtate of the body, from having a ſhare in promoting the degeneracy of ſcrophulous ulcers; yet it is improbable to ſuppoſe, that it is the ſole cauſe of ſuch depravity in the conſtitution. Many inſtances of more confirmed relaxation have appeared, where the ulcers were found to diſcharge a laudable purulent matter.

Whatever difficulty there may ariſe in inveſtigating the proximate cauſe of ſcrophula; we can have none in pointing out what regimen and diet is moſt ſuitable for counteracting its baneful effects. The ſtate of relaxation and debility, inſeparably connected with this diſeaſe will undoubtedly authoriſe the adminiſtration of a generous diet, and the application of ſuch remedies as increaſe the tone and contractility of the moving fibres: we muſt, therefore, ſupply the patient with plenty of animal food, and that of the moſt nutritious quality, and the moſt eaſy of digeſtion. If one or more ulcers be preſent and happen to diſcharge profuſely, which is commonly the caſe, the univerſal debility conſequent thereon, will ſtill more juſtifiably warrant the free and repeated uſe of a nouriſhing diet; even in the indolent ſtate of the tumors, theſe directions I apprehend are in ſome degree admiſſible, as they aſſiſt in correcting the general cachectic ſtate of the body. The increaſing the tone of the fibres, as I have juſt now obſerved, is as neceſſary as the other part of the cure, and in this way I conceive Sea Bathing and the Peruvian Bark, ſo univerſally employed, to be advantageous.

I ſuppoſe it will be generally admitted, from the foregoing obſervations, that whatever part of the ſyſtem theſe ſcrophulous ulcers occupy, the practice ought to hold good with very few reſtrictions. If a reſtorative diet be eligible, when the ulcers attack any certain part whatſoever; it muſt, of courſe, be equally ſo in any other, on condition that it is neither heating or inflammatory. The Peruvian Bark will, I ſuppoſe, on the ſame principles be proper and uſeful. From theſe conſiderations, a ſtrong preſumption ariſes, that a nouriſhing diet and the Peruvian Bark may be employed in the Phthiſis Scrophuloſa with ſafety. That there is ſuch a diſeaſe, I believe, very few Phyſicians will deny, and from what I have delivered on this ſubject before, and from the teſtimonies of ſeveral diſtinguiſhed Practitioners, it would be altogether ſuperfluous to advance any thing farther on this matter. Hence when we have juſt grounds for ſuſpecting that ſcrophulous tubercles exiſt in the lungs; we are fully authoriſed to deviate from the common and eſtabliſhed practice of confining the patient entirely to a milk and vegetable diet; and may with propriety adminiſter animal food in very ſmall quantities. The Bark may, with equal juſtice, be given as a corrector of the cachectic ſtate of the body. But when the ulcers begin to diſcharge their purulent matter freely, we ſhould perhaps be ſtill more attentive in guarding againſt the approaching emaciation: the animal food may probably be given in this ſtage with greater ſafety and freedom than when the tubercles are in a ſtate of indolence. It ought to be, however, adminiſtered in ſuch a manner, as to have its digeſtion over before the attack of the Hectic paroxyſm. On the whole, it will be ſufficient to call the attention of Phyſicians, to the ſtrict ſimilarity between the Phthiſis Scrophuloſa, and the external exiſtence of Scrophula, without determining what mode of cure ſhould be adopted in either; at leaſt this ſimilarity appeared ſo ſtriking to me, that I deemed it juſtifiable to try by experiment, what I have juſt now delivered in

theory.

theory. I muſt own, that the ſucceſs I met with did not fully anſwer the very ſanguine expectations I entertained from reflecting ſeriouſly on ſuch a ſeemingly rational, and well-grounded doctrine: however, it ſucceeded ſo far, as in my opinion, to warrant its future adminiſtration in every inſtance of the Phthiſis Scrophuloſa.

In ſome inſtances of this diſorder, which were ſeemingly well marked, I ſaw the patients confined for a conſiderable time to a milk and vegetable diet; when in moſt caſes, the powers of the conſtitution were ſo much reduced as to forbid the experiment being puſhed any farther, without imminent danger: on the other hand, when the contrary practice was adopted, and the patient was permitted the daily uſe of animal food, the ſtrength of the body was in general ſpeedily reſtored, and every mark and appearance of the re-eſtabliſhment of health and vivacity ſeemed to follow. But it appeared, that the difficulty of breathing was rather aggravated. This ſeemed to be the caſe, though the food was the mildeſt of the kind that could be procured; and, though given in very moderate portions.

The time was then equally divided between the animal and vegetable food, the former being given one day, and the latter another; in this way, matters were conducted with great advantage to the patients. The animal food was commonly adminiſtered in a liquid form; care being taken to have it as nutritious as poſſible, and to have it adminiſtered in very ſmall quantities at a time. If ſolid food was deemed neceſſary, Fowl, alone, was recommended.

This mode of proceeding will, I expect, be found advantageous, nor do I think, will any Phyſician, when he has put it to the teſt of experiment, condemn me for recommending it. Surely, it appears perfectly manifeſt, that the ulcer or ulcers in this ſpecies of the diſorder, are the direct conſequence of ſome fault or depravity in the body at large, and that in order to remove the affection of the lungs, ſuch remedies ſhould be applied as have a probability of correcting the general cachectic ſtate of the habit.

Having thus endeavoured to ſhew what kind of diet is moſt eligible in the Phthiſis Scrophuloſa, we are next to conſider what ſort is to be made uſe of in the other ſpecies of the diſorder.

In enumerating the different cauſes that have been aſſigned as productive of Phthiſis, we ventured to aſſert, that no caſe, except that from Lues Venerea or Scrophula, could with propriety be conſidered as a topical affection, depending on any fault of the Conſtitution. Every inſtance beſides was ſaid to come on in conſequence of a topical inflammation in the organ itſelf, as from Pleuriſy, exanthematous diſeaſes, hæmorrhagy, catarrh, and others. When therefore we can trace the ulcer of the lungs to any of theſe cauſes, we ſhould confine the patient to a milk and vegetable diet: recollecting, at the ſame time, that the diſorder is different (toto cælo) from the ſcrophulous ſpecies we have been ſpeaking of, and that our attention ſhould be ſolely directed to the removal of the topical inflammation. The milk and vegetable diet ſhould be continued for a proper length of time, at leaſt, until manifeſt ſigns of univerſal weakneſs, and inanition appear. The inſtructions neceſſary for directing this part of the cure, are to be met with in every writer on this diſeaſe, to whom we muſt beg leave to refer our readers. If after a ſufficient trial of this diet, we find that the diſeaſe proceeds with its uſual malignancy, we are authoriſed from the reaſon of things, to attempt ſome other method of cure. On this ſubject, however, I cannot ſpeak with any confidence, and ſhall only offer ſome conjectures, which may be condemned or embraced, as Practitioners think proper.

For a conſiderable time after the vomica burſts, a degree of inflammation cheriſhes, and ſupports the purulent diſcharge; but, are we, from this circumſtance, entitled to conclude, that the ſame diſpoſition of the veſſels continues unaltered for months, and even for years? are we to ſuppoſe, that when the body is very much exhauſted, ſuch an inflammatory affection can ſubſiſt, as would prevent the uſe of a moderate portion of animal food in a mild and inoffenſive ſtate. The beſt method of elucidating this ſubject, is, by appealing to the common practice of treating ſimple, purulent ulcers externally. In this kind of ulcer, the firſt and moſt important object of the Surgeon, in order to promote a cure, is to leſſen the inflammation of the parts by emollient poultices, frequently repeated; by a low diet and the antiphlogiſtic regimen in general, the admiſſion of air excepted. But, when by nature or art, this inflammatory diſpoſition is removed, the veſſels acquire a different mode of action, by which they often continue to pour out the fluids for forming the purulent matter.

In this ſtate of things, the practice is always reverſed, at leaſt it ſhould be ſo, and, inſtead of reducing the patient, by a low and exhauſting diet, it is found abſolutely neceſſary, for the healing of the ulcerated parts, to ſupply the patient with plenty of animal food, and that of a very nutritious kind. Attend to what a very ingenious author has delivered on diet, when treating of the ſimple, purulent ulcer.

"In almoſt every caſe of ulcer, particu-"lar directions have been given by Practi-"tioners, with reſpect to regimen; and in "general, a low, ſpare diet has been pre-"ſcribed. Such regulations, however, "when carried to a great length, almoſt "conſtantly do miſchief; for they ſeldom "fail to relax the habit conſiderably, and "to produce other diſagreeable effects, "particularly on the nature of the matter "diſcharged from ſores."

"The only attention, which in this "reſpect ſeems to be neceſſary, is to guard "againſt all exceſs in eating or drinking; "for whatever has the effect of producing "merely a ſlight, temporary fever, with "any additional inflammation, proves in "ſuch caſes always very prejudicial; but, "in place of a diet much lower than uſual, "as is moſt frequently recommended, a

" more full and nouriſhing regimen, than
" the patient, even in a ſtate of health has
" been accuſtomed to, is often found to
" prove ſerviceable."

" For the diſcharge of purulent matter
" proves always ſo very debilitating, that
" in large ulcers, when great quantities of
" it are afforded, this circumſtance alone,
" generally weakens the patient too much,
" if the conſtitution be not at the ſame
" time enabled to ſupport it by a proper
" diet. Indeed it is conſtantly found, that
" the cure of ſuch ſores goes on much
" more eaſily when the patient is kept in
" his uſual habit of body, than when his
" ſyſtem is much reduced by a very low
" allowance; nay, I have had many opportunities
" of obſerving, that ulcers,
" even of the worſt kinds, are ſoon
" brought to heal, by the uſe of a nouriſhing
" diet alone, after they have obſtinately
" reſiſted all the uſual applications
" and remedies."†

The analogy that ſubſiſts between the ſpecies of ulcer this author has been treating

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† Vid. Bell on ulcers, p. 214. 3d. Edit.

ing of, and that of the Lungs, from inflammatory affections, appears ſo perfectly ſtriking, that I need not call the attention of my readers particularly to this ſubject. The ſame cauſes frequently operate in producing the one and the other; they are ſimilar in their beginning, in their advancement, and decline; and of courſe, their treatment ſhould, in many reſpects, be ſimilar. It is true that the directions given here, extend to ulcers of different denominations; but they are more eſpecially adapted to thoſe which are attended with a profuſe diſcharge of purulent matter. Indeed I would not entirely transfer the practice recommended by Mr. Bell, to the ſpecies of Phthiſis under conſideration, as I am perſuaded that it cannot be carried to ſuch lengths in it, as in the caſe of a ſimple, purulent ulcer, occurring *externally*.

From the contiguity and conſent of the lungs with the ſtomach, a full meal of animal food will have the effect of increaſing the difficulty of breathing and inflammation attendant on the Phthiſis. It would be raſh and inconſiderate to ſupply the patient in this caſe ſo freely with animal food, as in the caſe of a ſimilar external ulcer. It will anſwer every good purpoſe to diminiſh the quantity of it, and have it adminiſtered as eaſy of digeſtion as poſſible. In this manner we will, in ſome meaſure, be able to guard againſt the rapid ſtrides of the emaciation and debility of the body, without incurring any danger from dyſpnœa or inflammation. Before I quit this ſubject, I muſt farther obſerve, that the purulent matter of the ulcer, daily eroding the ſubſtance of the lungs, will, in general, have made a conſiderable breach, by the time that the advanced period of Phthiſis arrives. The convenience of the receptacle for the lodgment of the pus, the ulcer being ſeated in an internal part, and removed from the influence of topical applications, muſt certainly favour the eroſion of the Lungs. When this is the caſe, we cannot expect that the loſs of ſubſtance can be reſtored, which is ſo neceſſary for the healing of the ulcer, without introducing into the circulating fluids a proper quantity of nutritious aliment. For, this purpoſe alone, excluſively of any other conſideration, it is ſurpriſing that Phyſicians have not inſiſted more generally on a nouriſhing diet in this ſtage of the diſorder. The argument, at leaſt, appears to me in a very ſtriking point of view; I ſhall, however, endeavour to ſtrengthen it by a quotation from the ingenious author already mentioned. Speaking of the advantages to be reaped from the production of granulations in ſores, he reaſons as follows:

"A low and emaciated ſtate of the "ſyſtem too, proceeding either from a "very poor diet, or from immoderate eva-"cuations, is found to be very prejudi-"cial to the growth of new parts; for, "as the ſupply of ſuch accidental loſſes "as occur in ſores, muſt render it neceſ-"ſary to ſupply the ſyſtem with a larger "proportion of nutritious matter than is "requiſite, when there are no loſſes or "deficiencies to be repaired; if a patient

“ in ſuch a ſituation be kept upon a low
“ allowance in point of diet, and eſpe-
“ cially, if at the ſame time the diſcharge
“ from the ulcer is conſiderable, the repair
“ of any deficiencies muſt in ſuch circum-
“ ſtances, it is evident, go on much more
“ ſlowly than when the contrary of theſe
“ occur: and in fact we find, though a
“ very plethoric habit of body, with a full
“ allowance of heating, nouriſhing diet,
“ is not proper for the cure of any kind of
“ ſores; yet, that an emaciated ſtate, and
“ a low, debilitating regimen, prove equally
“ prejudicial.”

The train of reaſoning now purſued, will, I preſume, be found ſufficiently ſtrong to warrant the giving a moderate portion of animal food in the advanced ſtage of the Conſumption, which we are treating of. But, in order to remove effectually any objection that may be made to our doctrine, it ought to be particularly obſerved, that the patients appetites and conſtitutions ſhould be carefully attended to by their Phyſicians, in order to make ſuch changes in the diet, with reſpect to quantity and quality, as certain circumſtances will point out to be neceſſary; for, though from the nature of things, it may appear that the diet under conſideration is, on many occaſions, proper and neceſſary, yet the peculiarity of the patients conſtitutions will often diſappoint any expectation raiſed on the baſis of theory, and overthrow any dogmatical ſyſtem that can poſſibly be eſtabliſhed: ſo that, on the whole, it ſhould be the object of Practitioners (after cautiouſly trying the methods recommended by writers of different ſentiments) to adopt that practice which their experience will demonſtrate to be the moſt ſucceſsful.

It is ſcarcely neceſſary to mention that this diet, we have been recommending, ought never to be adminiſtered to Phthiſical patients, during the paroxyſms of the Hectic fever. Moſt writers on this diſeaſe, are well aware of the diſadvantages attendant on ſuch a practice, and indeed it requires no authority to confirm its condemnation. Common ſenſe will dictate to every Phyſician, that no patient during this febrile ſtate, will reliſh, or can well digeſt any ſolid food which is given him. It will always be ſufficient to ſupply him with ſome cooling, diluent liquor, until the paroxyſm is ended, ſuch as Barley water acidulated with lemon juice, or whey, when properly made. Theſe are uſeful in allaying the febrile heat and thirſt of the patient. In this way, I can readily explain the operation of the celebrated Noſtrum of Aſſes Milk, in the cure of Conſumptions. Any good effect that it can poſſibly produce, is merely by its light, cooling, and aceſcent qualities. I never could reconcile it to myſelf, that it was endued with any ſpecific power in alleviating this diſeaſe, or that it was ſuperior to the whey of cows milk, or perhaps to any diluent acid liquor. Aſſes milk is very much diveſted of the oily and caſeous parts which appear in pretty large quantities in the milk of other animals: hence the acid quality being moſt predominant, it is very well calculated for abating the heat of a Hectic paroxyſm; but to ſuppoſe that it is poſſeſſed of any other properties, is in my opinion a very erroneous conjecture.

I would extend this reaſoning farther, and ſay, that the operation of Goats whey, ſo commonly preſcribed in caſes of Conſumption, depends in a great meaſure, on the ſame principles with thoſe of Aſſes milk, whey, and others.

Having thus delivered our opinions on the conduct to be purſued in regulating the dietetic part, we are next to attend to the other auxiliaries, which may be made uſe of in the cure of Phthiſis.

Too much care and aſſiduity cannot be employed in watching the approach of this diſorder. When a conſtant troubleſome cough occurs, while ſcrophulous tumors or ulcers appear externally, or when general marks of a ſcrophulous habit are preſent without them; there is a juſt foundation for ſuppoſing that tubercles have taken place in the lungs. In this caſe, and in every ſpecies of the incipient Phthiſis, it will be abſolutely neceſſary to guard the lungs againſt every irritation, eſpecially that from ſuppreſſed perſpiration, and the conſequent determination of fluids to the internal parts: hence, the ſupporting of theſe at the ſurface of the body, has been juſtly conſidered an important part of the palliative cure.

Emetics are very powerful in keeping off the tendency of the fluids from the internal parts, and have been recommended by different writers on this diſeaſe. The ſingular good ſucceſs attendant on the operation of vomiting in catarrhal affections, may lead us by analogy to a ſimilar practice in the Phthiſis. But a Catarrh is commonly a ſlight affection of the mucous follicles of the Bronchii, conſiſting merely in an increaſed diſcharge of mucus from theſe glands, without any conſiderable degree of obſtruction, and generally yields to proper management; while on the other hand the Phthiſis ariſes from indurated glands of a long ſtanding, and ſeldom gives way to the moſt efficacious reſolvents.

I have before ſuppoſed, that the frequent repetition of Catarrh might operate in ſuch a manner, as to produce obſtructions in the bronchial glands. In this caſe vomiting will probably be attended with leſs hazard than in any other inſtance whatſoever. As in every Catarrh of any duration, vomiting is probably the moſt effectual remedy, ſo when ſuch an affection is in danger of occaſioning tubercles, then repeated vomiting will be the moſt probable means of preventing the formation of theſe tumors. But in the caſe of inflamed tubercles, the frequent uſe of emetics appears to be a doubtful practice. The violent agitation and concuſſion that the lungs undergo during ſuch an operation, will probably irritate the tubercles, and ſoon hurry on that ſtate, which we ſo anxiouſly wiſh to prevent.

Moreover, the repeated action of vomiting muſt weaken the powers of the body in general, and thoſe of the ſtomach in particular; ſo that the conſtitution may, in a ſhort time, fall a ſacrifice to the temerity of ſuch a practice.

Whatever view we take of this ſubject, we dare not venture to recommend vomiting, as a general remedy either to reſolve inflamed tubercles, or to promote perſpiration. Several other methods, at leaſt with the latter intention, can be employed without the apprehenſion of any bad conſequences attending their uſe. To this purpoſe, riding on horſeback, or geſtation by ſea or land, is particularly well adapted, and the one or the other may be tried according as the ſtage of the diſorder, the ſtrength of the patient, and the diſcretion of the Phyſician will direct. Since the days of Sydenham, no remedy has been more generally and more confidentially employed in the cure of Phthiſis, than riding on horſeback; of late, however, it has fallen into diſrepute. Though we cannot place ſuch confidence in this remedy, or employ it ſo unlimitedly as the illuſtrious Sydenham did; yet we contend, that it is not ſo dangerous as late writers would have us believe. Any irritation given to the lungs by this mode of exerciſe, is very inconſiderable, except it is rendered too violent, and continued uninterruptedly for an improper length of time; and there is little doubt, that under the ſame reſtrictions, the circulation of the blood is very little accelerated.

The moſt material objection to riding on horſeback that I can perceive, is the patient's fatigue, in a delicate and feeble ſituation, from the continual jolting of the horſe; but this obſtacle can be eaſily ſurmounted, by walking the horſe only, if the perſon be in a debilitated ſtate; and if he be in the incipient ſtage of his diſorder, he cannot poſſibly receive any injury, from the gentle motion of a ſmooth and eaſy trotted horſe. Before any conſiderable degree of inflammation comes on the tubercles, I am of opinion, that this remedy, when judiciouſly managed, and duly perſiſted in, may prove very uſeful in retarding the diſeaſe.

When, however, the Hectic exacerbations appear to be well marked, and the patient is any way exhauſted, it is by no means admiſſible. Though this be the caſe, Phyſicians ſhould be very cautious how they condemn from any pre-conceived hypotheſis, a practice, in toto, which may materially conduce to the ſafety of mankind; more eſpecially in the preſent caſe, as riding on horſeback can be accompliſhed by many patients, who have it not in their power to employ any other convenient vehicle for geſtation. I will venture to aſſert, that no Practitioner can with ſafety declare, that riding on horſeback, conducted on the principles juſt now mentioned, had ever injured his patients.

Though I aſſert the innocence and utility of this exerciſe, under certain reſtrictions, I ſtill believe, that other modes of geſtation are preferable; not that they are more effectual in anſwering the intended purpoſe than the former, but that they can be continued for any length of time, which the Phyſician chooſes, by ſea or land, without fatiguing the patient.

How uſeful geſtation by ſea muſt be in the Phthiſis, appears from a fact well known to moſt people who have been at ſea for any time. Thoſe who are unaccuſtomed to a ſeafaring life, become generally coſtive in a ſhort time after they ſet out to ſea; the perſpiration is ſo far increaſed by the motion of the veſſel, as to rob the inteſtinal canal of the liquid matter that lubricates it, and is a principal means of keeping the body open. The ſame change, I apprehend, takes place, relative to the ſtate of perſpiration in the lungs; and in this way, I preſume, the long voyages, as preſcribed by the Antients, have operated; and by this remedy alone, many are ſaid to have been effectually cured of the Phthiſis, who were deemed irremediably loſt.

Heat is a great promoter of perſpiration, and if not applied in ſuch a degree as to induce any relaxation or debility, is ſeemingly a probable means of relieving conſumptive patients. Hence, the removing ſuch Valetudinarians, from cold to warm climates, has been a practice of long ſtanding; and though it muſt be owned that it bids fair for alleviating the ſymptoms of Phthiſis, yet we ſeldom find it produce thoſe advantages, which we were naturally ſuppoſed to expect. This may, in ſome meaſure, be attributed to the condition in which patients are in, when they are deſired to change their clime. In the incipient ſtate of the diſorder, it is ſometimes a difficult matter to determine with certainty, whether the caſe is to be looked upon as a beginning conſumption, or a ſimple catarrhal affection; ſo that the neceſſary precautions are ſeldom taken, until the ſymptoms declare themſelves more conſpicuouſly, and when the diſeaſe has often taken ſuch root, as to withſtand every effort of medical aſſiſtance.

The ſending of patients to a warmer hemiſphere than that in which they reſide, without firſt paying attention to the ſtage of their diſeaſe, is a very ill-judged mode of proceeding. How often do we ſee the wretched and emaciated remains of youth and beauty, in the laſt ſtage of a Conſumption, removed to France, Spain, and other Countries, without the ſmalleſt probability of their ever returning to their native ſoil?

Surely, any hopes of a recovery, by a remedy of this kind, that we are entitled to entertain, conſiſt totally, in ſending off the patient early in the diſorder, and before the Hectic fever has ſupervened; then the mildneſs of the climate may have the effect of retarding the inflammation of the tubercles, by ſupporting the perſpiration, and determining the fluids to the ſurface of the body. But if the time is protracted, the warmth of Atmoſphere may concur with the Hectic fever in diſſipating the fluids, and relaxing the ſolid parts, and thereby favour the emaciation and debility which are at length to end in the patient's final diſſolution.

This fatal event may be ſuppoſed to take place the more readily, as the diet preſcribed in cold, as well as in warm countries, contains very little nutritious matter; ſo that it appears in a manner impoſſible for a perſon, far advanced in a Conſumption, to withſtand the united efforts of ſo many powerful cauſes. It is true, indeed, that the change of air, independently of any other circumſtance, may be productive of advantage, even in caſes of a very dangerous nature: but, if ſuch an occurrence is to be expected when the diſorder wears a formidable aſpect; our expectations will reſt on a better foundation, when it has not as yet diſcovered any ſigns of danger or malignancy. On the whole, we are clearly of opinion, that Phthiſical patients ſhould always be ſent to a warm climate, at a very early period of their diſorder, and ſeldom or never after the Hectic fever has made any remarkable breach in the Conſtitution.

Bliſtering plaſters, ſetons, and iſſues have been for many years employed as remedies of no ſmall value or eſtimation in the Phthiſis; the reputation they have obtained in certain ſpecies of the diſeaſe, has, in my opinion, led Practitioners to an indiſcriminate and ill-judged application of them. When it appears pretty evident from circumſtances, that the diſorder is brought on by a mere local, inflammatory affection, and that this inflammation ſtill ſubſiſts, there cannot be the ſmalleſt doubt of the propriety of repeated bliſtering, as no remedy we are acquainted with, is more powerful in removing topical inflammation. But if we have reaſon to apprehend, that ſcrophulous tubercles are in fault, bliſtering is not ſo properly indicated, as in the former caſe: for any degree of inflammation that invades theſe tumors, does not reſemble the common and well known affection, but is merely the effect of a univerſal cachexy, operating on a particular organ. It will, perhaps, be found that the frequent uſe of bliſters are moſt ſucceſsful in thoſe caſes, where the pain is acute, and leſs ſo, when it happens not to be acute: I am alſo ſtrongly of opinion, that in moſt caſes, the former is merely a topical, while the latter is the conſequence of a general affection of the body.

In thoſe caſes, wherein bliſters may not appear to be very uſeful, it is not inconſiſtent to ſuppoſe, that iſſues may, notwithſtanding, be inſerted in the thorax, with ſome proſpect of utility and ſucceſs; they will, on the general principle which we have endeavoured to eſtabliſh, avert the tendency of the fluids from the internal parts, without any danger of weakening the ſtrength and powers of the conſtitution by the evacuation they produce. To illuſtrate this ſubject, we often find iſſues employed with advantage in diſorders of the lungs; where the practice of bliſtering would be condemned as injudicious, and where no ſigns of plethora prevailed to warrant ſuch a procedure. Theſe are the chief means to be practiſed in the beginning of the Phthiſis, in order to prevent the tubercles from coming to ſuppuration; we ſhall next endeavour to find out how far a certain tribe of medicines endowed with the title of deobſtruent, may be uſeful in diſcuſſing the tubercles themſelves.

Mercury is now very well known to be one of the moſt juſtly celebrated medicines of this claſs, and is generally preſcribed in all caſes of obſtruction, and often with ſucceſs. Several ſpecies of glandular ſwellings however, reſiſt its efficacy, and are rather injured than benefited by its action. Among thoſe tumors which appear incapable of reſolution from its uſe, the ſcrophulous kind deſerve to be mentioned. It is well known to Phyſicians, and to many unfortunate Sufferers, that Mercury has no effect in removing ſcrophulous ſwellings. It has been obſerved even to haſten their progreſs to ſuppuration. In this ſtate of things, we can entertain no hopes of its proving uſeful in diſcuſſing tubercles in the lungs: the analogy of Phthiſis with Scrophula, though Mercury had never been adminiſtered in the former, is altogether too ſtriking to expect any advantage from this remedy as a reſolvent. But Mercury has been actually tried in ſeveral inſtances of confirmed Phthiſis, without any abatement; but rather with an aggravation of the ſymptoms. If there are any grounds for ſuſpecting that the ſyphillitic virus is the cauſe of the diſorder; then Mercury is to be adminiſtered without farther heſitation. But it ſhould be obſerved, that Mercury is altogether ſo violent in its operation, and ſo powerful in reducing the ſtrength and plumpneſs of the body, it ought to be given, if poſſible, before the Hectic fever ſupervenes, otherwiſe the conſtitution may fall a victim to its influence on the ſyſtem, before a radical cure could be accompliſhed. What other Deobſtruents the Materia Medica is capable of affording with a probability of ſucceſs, I cannot pretend to determine with certainty; I ſhall take notice of two only, and leave my readers to decide on their merits.

I have heretofore endeavoured to prove, that the tuberculous tumors of the lungs very commonly aroſe from Scrophula, and to this cauſe I principally aſcribed the obſtinacy and incurable nature of many Pulmonary Conſumptions: it will therefore, I apprehend, be allowable in me to allege, that whatever medicine is uſeful in diſcuſſing ſcrophulous ſwellings externally, may have a ſimilar effect on thoſe that are ſituate in the internal parts. On this principle, I would ſtrongly recommend the Leaves of Coltsfoot, in a ſtrong decoction, or its expreſſed juice, when this plant can be obtained in a vigorous ſtate, about April or May.

From the Latin name Tuſſilago, it appears to have been a long time held in eſteem as a uſeful Pectoral, as they term it; though, in reality, it is not ſuperior in that reſpect to any mucilaginous or oily ſubſtance that does not nauſeate the ſtomach. From its glutinous quality, it may be uſeful in allaying the continual cough that accompanies the Phthiſis, and in this way may be ſerviceable; though we were to expect no other advantage from its medicinal powers. But this is not the only benefit we are entitled to expect from it in the Conſumption of the Lungs: experience has inconteſtably proved it to be frequently an effectual remedy in reſolving Scrophulous Swellings; ſo that we may, with propriety, try what effect it will have in removing ſimilar tumors when ſeated in the Lungs.

Cicuta, has of late years been univerſally employed in all caſes of indolent ſwelling, and though it muſt be allowed, that it is not poſſeſſed of all the virtues commonly aſcribed to it; it is, however, a medicine of very conſiderable efficacy in many diſorders. I believe Cicuta has ſeldom been adminiſtered to Phthiſical patients in ſuch a manner, that a perſon may draw a ſafe concluſion from its effects, though it bids fairer, in my opinion, for removing tubercles, than ſeveral other medicines that have been cried up as valuable Noſtrums. I muſt own, that I do not expect a good deal from the deobſtruent power of this remedy; yet, I preſume, from its utility in removing tumors, analogous to theſe in the Lungs, that it is entitled to further trials. It has been frequently given in Scrophula, and appeared at different times to have diſcuſſed the ſwellings thereof; ſo that this circumſtance alone, ought, at leaſt, to influence Practitioners ſo far, as to determine its efficacy by future experiments. Since I began to employ Cicuta and Coltsfoot, I generally directed them to be given in the following manner.

As I had reaſon to believe that the Peruvian Bark might be uſed with advantage,

tage, I uſually combined its extract with the leaves of Cicuta, ground into a powder, and had them formed into pills, directing a glaſsful of the infuſion or expreſſed juice of Coltsfoot to be taken immediately after the pill or pills were ſwallowed.

In one caſe, wherein I put theſe medicines to the teſt, I thought the patient had reaped ſome benefit from them; but, as the Hectic fever was rapidly approaching, I deemed it prudent not to perſiſt any longer in the uſe of ſo powerful a medicine as the Cicuta. From what little experience I have had in the Conſumption, I am fully perſuaded that patients in the advanced ſtage of the diſorder, will not be able to undergo the action of Cicuta, when given in ſuch a quantity, as that any advantage may be expected from it as a deobſtruent. I have even found the infuſion of Coltsfoot in the Hectic fever nauſeate the ſtomach, and ſometimes bring on a vomiting. We ſhould therefore, when we intend to try the virtues of theſe medicines, begin to give them as ſoon as we have any grounds for ſuppoſing that tuberculous tumors are in the Lungs, and continue them for ſuch a length of time, as may afford us an opportunity of judging of their effects with ſome certainty and ſatisfaction.

Dr. Cullen in his lectures on the practice of phyſic, has recommended to his pupils a trial of the Cicuta and Coltsfoot, when tubercles were ſuppoſed to exiſt in the Lungs; he ſays, that he never made any experiments to this purpoſe, but is of opinion, that there is a ſtrong probability of theſe medicines ſucceeding in many caſes. Such a reſpectable authority will, I expect, be ſufficient to recommend them to the notice of Practitioners.

As mineral waters are very generally preſcribed in the Phthiſis Pulmonalis, it will be proper to try how far they are entitled to the extravagant praiſes uſually conferred on them. In this Iſland, the tepid waters of Mallow; and in England, thoſe of Briſtol, are held in the greateſt eſtimation. Many diſorders depending on different and oppoſite cauſes, as Catarrhs, Conſumptions, Hemorrhagies, &c. &c. are ſaid to have been radically cured by the drinking of theſe minerals; a circumſtance which ſtrongly militates againſt the numerous and exaggerated accounts of cures being performed by their uſe. However, before any thing can be determined concerning them, it will be neceſſary to enumerate the different mineral ſubſtances with which they are impregnated, in order to eſtabliſh ſuch principles as may aſſiſt us in judging what confidence is to be repoſed in them for the cure of Phthiſis.

Thoſe who have chemically analiſed the waters of Mallow and Briſtol, have found that the principal ingredients in them were a portion of aſtringent earth, and a ſmall quantity of Marine and Nitre, or Glauber's Salt. The proportion of the ſaline matter to the earthy is ſo very inconſiderable, that the former cannot be looked upon as capable of having any influence in the cure of Phthiſis.

Mallow water ſprings from the bottom of a great rock of limeſtone, and contiguous to it are rocks of rotten, and partly chalky limeſtone.† Hence it is not improbable to ſuppoſe, that the virtues of this water are owing to ſome lime diffuſed through the water in a ſubtiliſed ſtate, and kept ſuſpended therein by fixed air, or ſome other acid. But whether it is this matter, a calcareous earth, or ſome other ſubſtance that enters into the water, avails very little, as we know from its effervеſcing with acids, its ſenſible qualities and effects on the human body, that any advantage to be obtained from it conſiſts principally in its being of an abſorbent and binding nature.

From this ſlight ſketch of Briſtol and Mallow waters, I apprehend it will not be a difficult matter to form ſome probable conjectures with reſpect to their modus operandi in many diſeaſes. The earthy ſubſtance being the moſt predominant, and appearing alſo to be the moſt efficacious ingredient, from its abſorbent powers, it ſeems well adapted to the removal of any diſeaſe ariſing from a morbid acidity in the primæ viæ, and in this way may remove dyſpepſia and ſpaſmodic affections of the alimentary canal. Moreover, it is entitled to farther reputation, being poſſeſſed of a conſiderable degree of aſtringency; it is likewiſe tolerably well calculated for ſuppreſſing ſeveral morbid ſecretions in the human body.

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† Vid. Rutty on Min. Waters, p. 286.

From this inveſtigation, I can readily comprehend how acidity in the ſtomach and bowels, inveterate Gonorrhœas and Catarrhs, Hemorrhagies proceeding from a relaxation of the veſſels, and other diſorders depending on ſimilar cauſes, may be removed by the drinking of theſe waters. But it appears to me, in a manner impoſſible, that obſtructions, the moſt obſtinate the human body can be invaded with, could be removed by an inconſiderable portion of abſorbent or aſtringent earth. The only plauſible argument that can be adduced in favour of theſe minerals is, that they are ſaid to have been uſeful in Scrophula. If this be the caſe, which I believe has happened very rarely, it muſt be the elementary water, and not any extraneous matter ſuſpended in it, that removes the obſtructions. For, how can we conceive that any aſtringent ſubſtance whatſoever is, from any quality inherent in it, capable of reſolving obſtructions of any nature: from what we are able to judge of aſtringents in general, we ſuppoſe, that they ought rather to produce a different effect than that of a deobſtruent.

From the reputed efficacy of ſalt water in Scrophula, thoſe minerals which contain a ſaline matter as their chief ingredient, may be employed with ſome probability of ſucceſs, at leaſt they are more promiſing than waters replete with an aſtringent earth.

On the whole, we are of opinion that little advantage is to be gained from the drinking of any mineral water for the diſcuſſion of Tubercles, but that thoſe impregnated with a ſaline matter are perhaps preferable to any that can be employed. It is well known, of late, that ſome Neutral Salts, when adminiſtered in ſuch a manner as not to produce much purging, have frequently removed obſtructions; which event muſt be owing to a portion of the ſaline matter having got into the courſe of the circulation.

I will not ſay that caſes of confirmed Phthiſis have never been removed during a courſe of drinking theſe tepid minerals; every Phyſician knows, that a Conſumption ſupervening an Hemoptyſis or Pleuriſy, has ſometimes diſappeared without any aſſiſtance from the medical art, and ſuch an occurrence is more likely to happen at theſe ſprings than at the patient's habitation: for the cure may advance the more ſpeedily on account of the change of air or climate, though we ſhould ſuppoſe, that the waters themſelves were not of the ſmalleſt utility. We ſhall very ſhortly endeavour to find out, in what ſpecies, and in what ſtage of Phthiſis the waters of Briſtol and Mallow may operate to ſome advantage; in the mean time, I will venture to allege, that no water whatſoever has radically cured an exquiſitely formed Phthiſis from Tubercles.

In oppoſition to what I have now advanced, it may be very ſpeciouſly obſerved, that no ſpeculative theory whatſoever ſhould be regarded, when facts and experience appear in direct contradiction to it. I admit the argument in its full force, but I beg leave to remark, that I am entitled to diſbelieve facts, when they are related with an air of the marvellous, and when ſuch a glaring inconſiſtency appears, as offers the greateſt violence to philoſophy and reaſon. Had we implicitly ſubmitted to the numberleſs reputed facts recorded in Phyſic, and promulged by the moſt reſpectable authorities, we would have had an infallible Noſtrum for every diſeaſe, and ſaved mankind ever after the endleſs pains of ſearching after their nature and cauſes. A man muſt be very credulous indeed, and never reflect on the fallibility of medicine, who could liſten with a grave face to the extravagant ſtories as I may call them, narrated in praiſe of medicinal waters in Conſumptions: for my part, I have not faith enough to credit ſuch accounts,

counts, nor do I think I ſhall ever repent of my incredulity. Did I wiſh to enter into a minute diſcuſſion of this point, I could adduce ſome incontrovertible facts in my favour, I would ſay, that in England and in Ireland too, there are innumerable living teſtimonies that fortify me againſt any oppoſition, and that the Proverbial phraſe of Morbus Anglicus, applied to the Conſumption of the Lungs, reſts on as firm a baſis now, as at any other time, notwithſtanding the aſſiſtance we have from our celebrated waters.

Phyſicians have not always properly diſtinguiſhed certain Catarrhal affections from confirmed ulcers in the Lungs.

Many perſons are accuſtomed, though no ulcer, at the ſame time, exiſts in the Lungs, to cough up conſiderable quantities of a purulent-like matter, which has often led Phyſicians to believe that theſe diſorders were real Pulmonary Conſumptions. On this idea, ſuch Patients have been ſent to Briſtol and Mallow, and frequently returned home in good health and ſpirits. Here the waters are certainly well adapted to the nature of the complaint, and of courſe, often prove highly ſerviceable. But, I need hardly inform the judicious reader, what different and oppoſite remedies both theſe diſorders require, and how circumſpect Phyſicians ought to be in forming the neceſſary diſtinctions between them. The miſtaking of Catarrhs, of a long ſtanding, for Conſumptions, has introduced into the treatment of the latter, many pernicious remedies, which are of late very fortunately condemned. What elſe could have miſled Practitioners for ſuch a number of years to employ the moſt heating Balſams in Conſumptions, but the ſucceſs they met with from the ſame remedies in Catarrhs?

I have thus delivered my ſentiments on this important ſubject; but from what I have ſaid, I would not wiſh to have it underſtood, that I meant to cry down theſe waters, as altogether uſeleſs in every inſtance of Phthiſis; they may have their advantages, under certain reſtrictions, and in what manner I ſhall now endeavour to explain.

When treating of the cauſes of Conſumption, I endeavoured to maintain that there were two different and oppoſite ſpecies of the diſeaſe; the one ariſing from a Scrophulous, and the other from a ſimple, purulent Ulcer. If there is reaſon to apprehend that the Hectic fever originates from the latter, and that this fever has continued for ſome time; there can be no reaſonable objection to the drinking of Briſtol and Mallow waters, their reputed utility in putting a ſtop to fluxes of different kinds, will warrant their exhibition in the ſpecies of Phthiſis under conſideration: for we ſuppoſe, that mild Aſtringents may be uſeful in this diſorder, as well as in the caſe of a ſimple, purulent ulcer externally. Though there is room for the indication now propoſed, and though in conſequence thereof, the waters of Briſtol or Mallow, may with propriety be uſed; yet few, I believe, who conſider this ſubject attentively, will place much confidence in them for the cure of internal ulcers. What effects the drinking of a large quantity of a light water may have, in abating the tenſion, and inflammation of internal parts, I will not venture to determine. I ſhould here, perhaps, propoſe ſome directions for treating the Cough, Diarrhœa, and other ſymptoms of the Phthiſis; but theſe are ſo ably handled of late, by different writers, that I cannot venture to advance any thing on them: and ſhall now put an end to this Treatiſe, with a few obſervations of a different nature.

Many obſervations have been made by Authors of reputation, which tell us, that a Mania coming on during a Hectic fever, has frequently retarded its progreſs, and ſometimes radically cured the diſeaſe. The ſame Phænomena have been obſerved with regard to pregnancy. Are we to imagine, that the purulent matter can be changed from a malignant to a laudable kind by the influence of Mania, or Pregnancy? Would it not be more rational to ſay, that the change the fibres undergo in theſe diſorders, prevents the matter from having its uſual aſcendancy on the ſyſtem.

We very well know, that Maniacs are generally of a tenſe and rigid fibre, and though a different habit of body was predominant before the diſorder came on, that as ſoon as the Mania diſcovers itſelf, this condition of the ſolids inſeparably attends it. The ſtate of pregnancy operates, perhaps in a ſimilar manner. Many of the diſorders commonly called nervous, (ariſing from an increaſed irritability of the body) have been retarded, and even effectually cured by pregnancy alone; I ſuppoſe, by giving that degree of tone to the fibres, which prevents them from being thrown into inordinate action. But, admitting that the abovementioned cauſes operate chiefly in changing the nature of the purulent matter: yet, from what has now been delivered, we cannot imagine that this change will be produced in any other manner, than by bringing about in the ſolid parts that ſtate ſo neceſſary to the cure of ſpaſmodic diſeaſes. Whether ſuch conjectures on this ſubject be true or falſe, they are, in my opinion, juſtifiable, as they are intended merely as hints to others, who have more abilities to proſecute an enquiry of ſuch importance. But if we are to eſtabliſh them as principles; it ſhould be an object with Phyſicians to correct the irritability of the body, in order to effect a cure in the Phthiſis. The medicines beſt ſuited for anſwering ſuch an intention, are well known to every Practitioner. Though, in the inſtance of an hereditary diſorder, no remedy that our doctrine points out may be effectual for promoting a cure: yet there are probably certain caſes, wherein ſuch remedies be may productive of advantage.

APPENDIX.

APPENDIX.

NOT having an opportunity of procuring the firſt Edition of Dr. Reid's Eſſay on the Phthiſis Pulmonalis, while the preceding part of this Work was in hands, I could not, of courſe, take notice of the Doctrines propoſed by this ingenious writer. But, on peruſing the ſecond Edition of this Publication, I find, that the Doctor has thought proper to introduce ſome opinions different from what I have endeavoured to eſtabliſh: I ſhall therefore take the liberty of making a few obſervations on ſome of his Theoretical principles. Indeed I ſhould not have entered on ſo diſagreeable a taſk, but that I think it a duty incumbent on me, to ſupport the Doctrines I have advanced, which cannot be effected in any other manner, than by anſwering ſome of Dr. Reid's arguments.

The Doctor attempts to prove, that the united action of cold and moiſture, is, in general, the principal cauſe of Tubercles. His ideas on this ſubject, cannot be conveyed to my readers in a more clear and ſatisfactory manner, than in his own language. Speaking of the effects that cold and moiſture have on the exhaling veſſels in changing the quality of the Lymph, he reaſons as follows:

Page 27. “Cold, united with moiſture, “when applied to the external ſurface of “the body, or by reſpiration to the internal ſurface of the Lungs, produces various complaints. Theſe effects have been “uſually accounted for, by the ſtoppage of “ſenſible or inſenſible perſpiration thereby “occaſioned.”

Page 29. “Perhaps the exhalent veſſels that ſecrete the fluid, ſerving to “moiſten the interſtices of the muſcles, “and muſcular fibres, may be ſo affected “by cold partially and ſuddenly applied, “as inſtead of a clear, tranſparent lymph, “to ſecrete a fluid ſo viſcid, as not readily “to be abſorbed by the lymphatic ſyſtem;

" and by its remaining ſome time occaſions " that ſtiffneſs and ſoreneſs in the parts, " which is *conſtantly felt*.

Page 32. " The exhalent veſſels in the " Lungs, opening in the air veſicles having " their apertures ſo altered as to produce " this viſcid lymph, a leſs quantity will be " ſecreted; and, if from the effects of cold " and moiſture, the inſenſible perſpiration " on the ſurface of the body ſhould be " obſtructed, and a larger quantity thrown " upon the Lungs, they will be loaded and " oppreſſed; their parynchematous ſubſtance " will become more denſe and elaſtic; " the diameters of the various branches " of the Pulmonary artery and vein, " will be diminiſhed by its preſſure, and " conſequently the circulation of the blood " through this organ will be impeded.

Page 36. " If diſeaſe produce ſuch a " change in the apertures of the exhaling " veſſels, and viſcidity in the lymph; the " ſame cauſe continuing to act, may probably " increaſe that viſcid quality, till it " ſhuts up their extremities, and conſtitutes " the ſmall granules every where

" found in diſeaſed Lungs, termed *Tuber-* " *cles.*"

Before we make any animadverſions on this Doctrine, it will be proper to give a ſhort ſketch of the moſt common effects of Cold on the Lungs.

When the human body in certain circumſtances, ſuch as on leaving a warm temperature, is afterwards expoſed for a conſiderable time to cold and moiſture, it is very often attacked with the following ſymptoms. The patient at firſt complains of a ſlight, tickling cough, with a difficulty of breathing through the noſe, attended with the ſenſation of pain and heavineſs in the forehead: about this time, or ſhortly after, the voice becomes hoarſe, and an uneaſineſs is felt in the breathing, accompanied with a fulneſs or ſenſe of ſtricture acroſs the cheſt. When a perſon is ſeized with a cold in this manner, a degree of the Cynanche Tonſillaris is frequently brought on, with ſwellings of the glands, about the throat and fauces. However the diſorder ſeems to be more particularly

cularly determined to the mucous glands of the Bronchii, which are probably affected on the firſt days of the complaint, with a ſpaſmodic conſtriction. It is this contracted ſtate of the veſſels, we ſuppoſe, that occaſions the diſtillation of a thin, acrid rheum from the glands of the noſe, throat, and fauces. The ſame diſcharge does alſo proceed from the mucous glands of the Bronchii, but gives way in a ſhort time to a large ſecretion of mucus, which is continually expectorated until the recovery of the patient. Theſe are the ordinary effects of cold applied to the human body, and from reaſoning on the matter, with an unprejudiced mind, we muſt conclude, that the mucous glands are principally affected, whether the cold operates as a ſtimulus on the ſurface, and produces its effects on the mucous glands by ſympathy, as a late ingenious writer[†] has aſſerted; or whether it operates, as moſt Phyſicians imagine, by ſuppreſſing the perſpiration.

[†] Vide Gardiner on the Animal Oeconomy, p. 245.

The mucous glands of the Lungs are deſtined by nature to ſecrete a ſlimy and viſcid ſubſtance, for the defence of the internal ſurface of this organ from the effects of the air in reſpiration: in a ſtate of health, this fluid is ſeldom diſcharged by coughing; but when certain irritating cauſes are applied to theſe glands, the mucus is often ſecreted in conſiderable quantities. When we can thus account for the phænomena of a cold, or more properly ſpeaking of a Catarrh, from an affection of the mucous glands, I can find no reaſon, why we ſhould ſuppoſe the exhalent veſſels to be ſo changed in their functions, as to afford a rationale for the ſymptoms. It is very well known, that the exhalent veſſels in the Lungs, and in other parts of the body, pour out a light, thin and colourleſs liquor only, while the mucous glands are every moment employed, in ſecreting a ropy and viſcid ſubſtance: are we then entitled to indulge the fancy ſo far, as to imagine, that the exhalent veſſels, and not the mucous glands, are primarily affected in Catarrh.

In different parts of the body, large ſecretions of mucus are occaſioned by various acrid ſtimuli, as well as by cold applied to the Lungs. Thus, in the Dyſentery, in the Catarrhus Veſicæ, as it is called, and in the Gonorrhœa Virulenta, mucus is often diſcharged profuſely, and I ſuppoſe, nobody will attempt to ſay, that it proceeds from the exhalent veſſels: the different kinds of matter in theſe diſorders that bring on the diſcharge, are applied directly to the excretories of the mucous glands, and by their irritation produce a morbid ſecretion in theſe parts. The exquiſite ſenſibility of the organs affected, even when no degree of inflammation ſubſiſts, is a convincing proof that they were deprived of the mucus which was intended to protect them from the various ſtimuli to which they are expoſed. The reaſoning now advanced, will hold equally good in the caſe of a Catarrh, as in the morbid affections juſt now mentioned.

If we were to ſuppoſe that the order of nature was ſo far changed, as that the exhalent veſſels ſecreted a mucous ſubſtance, and the mucous glands a ſerous fluid: would we allege in the inſtance of a Catarrh, Dyſentery, &c. that the latter, and not the former were chiefly affected. It is more than probable we would not. This would certainly appear, as if we were ſolicitous to find out a difficult and abſtruſe manner of accounting for the Phænomenon, while we are poſſeſſed of a more ſimple and rational way of explaining it. If a ſtream of cold air is applied to the head and throat in ſuch a degree as to produce the Cynanche Tonſillaris, it would be a difficult matter to perſuade us, that the exhalent veſſels and not the glands themſelves were in a ſtate of diſeaſe. If the morbid change took place in the former, much more dangerous effects would follow, according to Dr. Reid's explanation, than we in general experience from inflammatory affections of the internal fauces. We every day ſee examples of people, who were repeatedly attacked with ſwelling and inflammation of the Amygdalæ,

dalæ, yet never received any irreparable injury from ſuch a tranſitory *diſorder*.

In like manner, there are many now living, who have been attacked for ſeveral winters with Catarrhal affections, without the ſlighteſt tendency to a Pulmonary Conſumption remaining: the learned Doctor himſelf, needs no information on this ſubject to convince him, that this fact is incontrovertible. Indeed it would be one of the greateſt misfortunes that could poſſibly attend mankind, if one of the moſt formidable diſeaſes of the human frame, could be brought on in general by the action of cold. The Omnipotent Governor of Nature, has, in all probability wiſely guarded us againſt ſuch a direful calamity: He has not only appointed mucous glands for protecting the Lungs from the air in reſpiration, but probably alſo to anſwer ſome other beneficent purpoſe. It is well known to Phyſicians, that in Catarrhs, and Pneumonic inflammation, a viſcid expectoration frequently appears with a manifeſt alleviation of all the ſymptoms; the febrile heat, the tenſion of the thorax, and difficulty of breathing are often removed by the diſcharge of mucus alone, without the ſmalleſt interference of medical aſſiſtance: ſo that there is no abſurdity in ſuppoſing, that the mucous follicles of the Bronchii were intended for relieving, as well as for preventing diſeaſes.

If the application of cold to the human body, was ſo effectual in laying the foundation of a Pulmonary Phthiſis, as Dr. Reid ſuppoſes; what muſt be the fate of thoſe inhabitants of Northern regions, where the cold is ſometimes ſo intenſe, as to extinguiſh the vital principle by its influence.

If in the latitude of 51 or 52 North, the frequent occurrence of this diſorder can be accounted for, from the action of cold on the Lungs; how much more general ought it to be, in the different degrees of latitude from 52 to 90? But this is by no means the caſe; for from all the information we receive on this ſubject, it manifeſtly appears, that the inhabitants of theſe united countries, are more ſubject to the Pulmonary Conſumption than thoſe of any other nation whatſoever. Moreover, when pure inflammation is imagined to alter the ſtate of ſecretion in the exhalent veſſels; how is it poſſible that a mere tendency to ſuch a cauſe could produce the effect. In the ordinary ſtate of Catarrh, very little inflammation takes place, not at leaſt in general to ſuch a degree as to produce the ſuppoſed change in the ſerous fluid; even when the inflammation ariſes to ſuch a pitch as to be denominated Pneumonia or Pleuriſy, I ſee no juſt reaſon for embracing this Doctrine. Few diſeaſes, I believe, are more frequent in winter than inflammatory affections of the Lungs: yet no Phyſician will, I ſuppoſe, contend that a Pulmonary Conſumption is generally the conſequence; not only a Pleuriſy is not commonly productive of ſuch an effect, but this termination is allowed by the moſt attentive obſervers, not to be very frequent, even after the Abſceſs is formed. †

When this is the caſe, how can we imagine, that a Catarrhal Affection, which at the utmoſt, is a lower order of Pneumonic inflammation, could in moſt caſes be capable of producing a Conſumption.

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† "An Abſceſs in the Lungs in conſequence of Pneumonia, is not always followed by a Phthiſis, for ſometimes a Hectic fever is not formed; the matter poured into the Bronchii is a proper and benign pus, which is frequently coughed up very readily and ſpit out; and, though this purulent expectoration ſhould continue for ſome time, yet if a Hectic does not come on, the ulcer ſoon heals, and every morbid ſymptom diſappears."

Cullen's F. Lines, vol. ii. p. 376.
Edinb. Edit. 1784.

A Phthiſis from a ſuppuration, in conſequence of Pneumonic inflammation, is that which moſt rarely occurs in this Climate; and a Phthiſis does not always follow ſuch ſuppuration, when the Abſceſs formed ſoon breaks and diſcharges a laudable pus.

Ibid. p. 400.

† In the late Influenza, that raged over Europe, very few fell into Conſumptions,

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† Of 178 perſons who fell under my obſervation in this complaint, all are perfectly recovered, except three women; their coughs ſtill continue, and ſeem to have laid the foundation of Pulmonary Conſumption.

Dr. Campbell, Lancaſter.

I know not one inſtance of the diſorder terminating in a Phthiſis. I cannot, therefore, think that much of the inflammatory Diatheſis attended it, or that it is in general an attendant upon epidemic diſorders.

Dr. Flint, St. Andrew's.

I have met with no Conſumptions in conſequence of this complaint.

Dr. Kirkland, Aſhby.

The poorer inhabitants of this place are much ſubject to Pulmonary Conſumption, but I cannot learn, though I have directed my attention to this point, that they have been more ſo ſince the late diſeaſe.

Mr. Wilmer, Coventry.

Conſumptions were apprehended in habits diſpoſed to them, but no ſuch event was obſerved to happen in any caſe.

Dr. Anderſon, Alnwick.

It did not in any caſe, within the circle of my obſervation, degenerate into Pulmonary Conſumption.

Dr. Biſſet Knayton.

Vide Med. Commun. vol. i. p. 42.

except thoſe who were previouſly diſpoſed to the diſorder.

In a former part of this Treatiſe, I have endeavoured to explain in what manner a Catarrh, by frequent repetition, might generate an exquiſite Phthiſis Pulmonalis: but now, as well as then, I am firmly perſuaded that this diſorder does not originate in general from the action of cold, whether it operates by producing Catarrh, or otherwiſe.

Though Doctor Reid may probably be miſtaken in his Theoretical principles, his inſtructions on this ſubject may, however, be attended with beneficial effects; the formidable point of view in which he has placed the effects of cold on the human body, will ſo far operate on the minds of people, as to render them cautious how they expoſe themſelves raſhly to its influence.

The learned Doctor next proceeds to combat the generally received opinion, that Tubercles are of a Scrophulous nature. He argues in this manner.

Page 38. “That people with a Scro-“phulous habit of body, or with their “glands ſwelled and indurated, may have, “at the ſame time, a Pulmonary Con-“ſumption, does no more prove the diſ-“eaſe to be Scrophulous, than it would “be proved Cancerous, ſhould the patient “be afflicted with that dreadful malady.”

I perfectly agree with the ingenious Author, that no poſitive proof can be drawn from the external appearance of Scrophulous tumors, during the exiſtence of the Pulmonary Phthiſis, that the latter is truly a Scrophulous diſorder: but, I apprehend, if this matter is examined minutely, that the ſtrongeſt preſumptive proof will attend the enquiry. If it was found by experience, that the Scrophula was not a very frequent attendant on the Phthiſis; I would, with Dr. Reid, conſider ſuch a circumſtance, a mere accidental occurrence. I would alſo ſay, that it is an additional proof of the opinion, long ſince adopted in Phyſic, that two different cauſes can operate at the ſame time on the human body, and produce their diſtinct effects. But if I find from attentive obſervation, that children, who fall victims to the Scrophula, are very commonly attacked with the Pulmonary Conſumption, and that the latter is a capital agent in urging on the fatal cataſtrophe: if it appears that in riper years, either the deſcendants of Scrophulous parents, or thoſe who at the ſame time labour under Scrophulous tumors or ulcers externally, are moſt liable to the Phthiſis; finally, when we can neither perceive any Scrophulous ſwellings accompanying this diſorder, nor can trace it to an hereditary taint from Scrophula; but that the Scrophulous temperament is generally marked in Phthiſical patients: can we then look upon the Scrophula as having no influence in the production of Phthiſis. If any diſorder, whether hereditary, or brought on the conſtitution by accidental cauſes, was attended with ill-conditioned ulcers, and that it appeared from experience, a connexion ſubſiſted between it and the Phthiſis, at leaſt that both very frequently occurred in the ſame perſon, and that the ſame temperament was characteriſtic of each; would not Phyſicians in general ſuppoſe with juſtice, that ſuch a diſeaſe had no ſmall ſhare in laying the foundation of the Conſumption. This opinion they would the more readily embrace, if they thought that the operation of cold could not afford a ſatisfactory explanation of the phænomenon.

If the Phthiſis had no dependence on the Scrophula, how comes it to paſs that Catarrhal affections are not ſo fatal to any habit of body as to the Scrophulous? We often find that a very trifling Catarrh in ſome perſons (who were ſeemingly healthy before the attack) will baffle every effort of medical ſkill, while a Catarrhal fever or Peripneumony in perſons of a different temperament, will often diſappear without leaving the ſmalleſt tendency to a Phthiſis Pulmonalis. A convincing proof that the cold in the former caſe acted only as an exciting cauſe, in forwarding the inflammation of the Tubercles.

The moſt important part that next preſents itſelf, is an anatomical diſcuſſion, which is apt to miſlead a perſon not ſufficiently on his guard.

Loco citato. "The exiſtence of Lym-
"phatic glands in the ſubſtance of the
"Lungs has never yet been proved, nor
"even attempted: it is one of thoſe general
"aſſertions we ſo frequently meet in Me-
"dical Authors, miſleading the Student,
"and deceiving the Practitioner. From
"my own enquiries into this matter, I am
"diſpoſed to think there are none; and
"the more ſo, as I am ſupported in the
"opinion, by a late eminent and ingenious
"Anatomiſt."†

I muſt allow, that neither lymphatic veſſels, or glands, have yet been certainly diſcovered in the ſubſtance of the Lungs; but, I cannot from thence admit, that ſuch veſſels or glands are not to be met with, if Anatomiſts were fortunate enough to diſcover them. Many years have not elapſed ſince the exiſtence and peculiar œconomy of the lymphatic ſyſtem have been found out; even very lately, ſeveral conſiderable branches of lymphatics were brought to light by the addreſs and indefatigable zeal of Anatomiſts. No perſon whatſoever, can prove by injection or otherwiſe, that lymphatic veſſels are diſtributed through the human brain, though from their exiſtence in the brains of fiſhes, and in all parts of the human body, where abſorption is required, we may conclude, with a degree of ſafety, that the human brain is not deſtitute of ſo uſeful and neceſſary a part of its œconomy.†

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† Hewſon on the Lymphatics.

If Doctor Reid found (in different parts of the body, where lymphatic veſſels or glands have never been ſeen) tumors and ulcers perfectly ſimilar to thoſe of the Scrophula, at a time when many lymphatic glands were really affected with Scrophula; what concluſion ought he draw? will he ſay, that becauſe no lymphatic veſſels or glands have been found in the parts occupied by theſe tumors or ulcers, that they are not of a Scrophulous nature? though the ſtricteſt ſimilarity ſubſiſts be-

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† Vide Monro, on the Nervous Syſtem.

tween them and thoſe that are really of that kind. I entertain ſo high an opinion of Dr. Reid's candour, as well as Medical abilities, that I cannot bring myſelf to imagine, he will from any predilection to his own Doctrine, deny the validity of this argument: for he is well convinced, that there are few Practitioners who do not every day meet with Scophulous tumors and ulcers, in ſeveral parts of the body, where no Lymphatic glands have ever rewarded the Anatomiſt's ſkill.

It is almoſt impoſſible to be deceived in this point: for the aſpect of a Scrophulous ulcer is altogether ſo characteriſtic, that any perſon who has carefully marked its peculiarities, will ſeldom be miſtaken in forming an almoſt infallible diagnoſtic.

It is univerſally known, that the Scrophula infeſts the extremities of the bones, which it enlarges, and very often erodes. It is frequently found to terminate in a confirmed Anchyloſis.

The affection of the joints, called white ſwelling, very commonly, and the Spina Ventoſa, always ariſes from a Scrophulous taint: yet, I ſuppoſe it cannot be alleged, that either the one or the other attacks the bones, in conſequence of its being a diſorder of the Lymphatic ſyſtem; for the bones are liable to many diſorders which have no connection with the Lymphatics.

When an obſtinate white ſwelling invades any of the joints of perſons who at the ſame time have Scrophulous ſwellings in different parts of the body, or who have merely ſtrong marks of a Scrophulous habit: will Dr. Reid contend that ſuch a combination will not aſſiſt us in forming a diagnoſtic? I apprehend he will not: for, this circumſtance alone will often direct us to diſcover the preciſe nature of the affection of the joint. If this mode of proceeding be admiſſible, which I ſuppoſe every Practitioner makes uſe of, in endeavouring to inveſtigate the nature of white ſwellings, there cannot poſſibly be any objection made againſt the ſame mode, in the caſe of a Phthiſis Pulmonalis. Moreover, if a perſon who labours under this diſorder, has, at the ſame time, Venereal ulcers in any part of his body, and that it appears on enquiry, the Venereal Virus had been received into the body, a long time previous to the appearance of the Phthiſis: there are few Phyſicians, in ſuch a caſe, that would not pronounce the Conſumption to have ariſen from the Syphillitic taint, and treat it according to ſuch a deciſion.

On the whole, by taking this view of the ſubject, it will perhaps be allowed, that Doctor Reid's arguments are more plauſible than concluſive; for though I gave up the point with reſpect to Lymphatic glands in the Lungs, an inſuperable objection ſtill remains, that Scrophulous affections are daily to be found in parts where Lymphatic glands have never been ſeen, and in others, where in all probability they will never be diſcovered.

We are next preſented by Doctor Reid, with ſeveral new and intereſting objections againſt the Doctrine of abſorbed pus, being the cauſe of the Pulmonary, Hectic fever.

Page 87. “ It is an axiom, I believe, “ will not be diſputed, that ſimilar cauſes “ will always produce ſimilar effects.

“ If, therefore, the fever attending Con- “ ſumption of the Lungs were cauſed by “ pus being abſorbed, and carried into the “ circulation; a fever of the ſame kind “ would take place from the ſuppoſed ab- “ ſorption of pus in other diſeaſes. The “ contrary muſt have been evident to every “ attentive Practitioner.

“ In an Abſceſs of the Liver or Pſoas “ muſcle, in a ſuppuration of the Kidneys, “ or any internal part, the fever is con- “ tinued with frequent rigours at irregular “ periods, but without regular remiſſions, “ *or morning ſweats.*”

I am ſorry to find, that the introduction of axioms into the ſcience of medicine, inſtead of improving it, as might naturally be expected, has been often employed in ſuch a manner as to involve it in greater obſcurity. The axiom now mentioned, when properly applied, holds good in every department of Philoſophy. Similar cauſes, ſtrictly ſpeaking, will always certainly produce ſimilar effects: but, if the cauſes happen to be differently modified, ſo as to vary from each other in the ſmalleſt degree, the effects of courſe muſt undergo a variation. Moreover, if the ſubject on which the cauſe operates, be differently circumſtanced at one time or other, the effects muſt alſo differ, though the cauſes ſhould have been invariably the ſame.

The above axiom can ſeldom be extenſively applied in the healing art; for, though nature generally appears uniform and conſiſtent in her operations: yet the peculiarity of conſtitution in one perſon will ſo alter the operation of the cauſe whether it be of a morbid or ſalutary nature, that the effects will be diſſimilar to what they were in another, admitting the cauſes were perfectly alike. Even ſimilar cauſes will not produce ſimilar effects on the ſame conſtitution, at different periods; ſo that it requires the utmoſt caution to adopt this mode of Philoſophiſing. It appears perfectly manifeſt, that Doctor Read has not ſcrupulouſly adhered to the axiom he has propoſed, for he expects that the ſame effects ſhould be produced by an Abſceſs in the Liver or Pſoas muſcle, when excluded from the air, as by one in the Lungs, which is daily expoſed to its influence.

We have innumerable proofs of the pernicious conſequences attendant on the admiſſion of air † to an ulcerated ſurface. Many

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† The bad effects of air, in every ſpecies of ſore, is well known to every Practitioner; but its pernicious influence on a newly opened abſceſs is often really aſtoniſhing. It firſt occaſions a total change in the nature of the matter, from perhaps a very laudable pus to a thin, ill-digeſted ſanies; and afterwards brings on a quickneſs of pulſe, debilitating night ſweats, and other ſymptoms of Hectic fever, which for the moſt part, when the collection has been conſiderable, either carries the patient off in a ſhort time, or terminates in a confirmed Phthiſis, which ſooner or later proves fatal.

This I have in a great many inſtances had occaſion to obſerve, and that in ſuch caſes it is the admiſſion of air alone, which produces all theſe bad ſymptoms, is rendered highly probable from this circumſtance, that of a great number of patients who have laboured under ſuch diſorders, many have remained for a conſiderable time, with large Abſceſſes fully formed, and without having any one ſymptom of Hectic whatever: but when they have ever exceeded an ordinary or moderate ſize, I have ſeldom

Many inſtances of Abſceſſes have occurred, which were never accompanied with any Hectic ſymptom, while they remained ſhut out from the air, when as ſoon as the air was admitted to them, the Hectic ſymptoms immediately followed. And taking into account this circumſtance of the admiſſion of air; I hold, that there is not ſo material a difference between the fever of an Abſceſs in the Pſoas muſcle or Liver, and that of an Abſceſs in the Lungs, as Doctor Reid would have us believe.

He adduces ſome examples of the former, where the fever was found to be of the continued type, and his experience, if he thought proper, would authoriſe him to produce many ſimilar inſtances of the latter. Though I cannot boaſt of much experience in this diſeaſe; yet I have met with two caſes of Pulmonary Conſumption, without

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ſeldom known an inſtance of their being opened by a large inciſion, without almoſt every Hectic ſymptom taking place; and this generally in leſs than forty-eight hours, from the time of their being laid open.

Vide Bell on Ulcers, p. 79.

without any evidently marked exacerbation: the patients expectorated every day large quantities of purulent matter, the pulſe was ſmall and quick, they waſted away gradually, and were, at length, carried off by the Colliquative Diarrhœa. Through the whole courſe of the diſeaſe in both patients, there was not the ſmalleſt appearance of ſweatings, either by day or night. In two or three other caſes, which occurred to me, the evening exacerbations were pretty well marked; yet the ſweatings were totally irregular. Since ſuch deviations from the ordinary courſe of things have appeared to me, how many more of the ſame nature, muſt not Dr. Reid's long experience, extenſive practice, and accurate obſervations have diſcovered. I will appeal to his own candour for the the veracity of what I have advanced, and let him decide how far the few caſes he has brought forward, can eſtabliſh a diſtinction between the fever from an Abſceſs in the Liver or Pſoas muſcle, and that from an Abſceſs in the Lungs.

That induſtrious Phyſician De Haen, who had probably as much experience in Abſceſſes at the Iſchium, and parts adjacent, as came to the ſhare of any one Practitioner, in all his obſervations, does not once inſinuate, that there is any eſſential difference between the fever from an Abſceſs in theſe parts, and that from an Ulcer in the Lungs. On the contrary, in many places, he deſcribes the ſymptoms attending both, as perfectly ſimilar. He alſo ſays, that when the event of the former was to be fatal, the patient was generally attacked for ſome time before with a Colliquative Diarrhœa; as in the caſe of an exquiſitely formed Pulmonary Conſumption. Several examples of the ſame kind he produces from the writings of Hippocrates.

De Haen perceiving that the Hectic ſymptoms were always ſo aggravated when the tumor was opened by a large inciſion, that he found it abſolutely neceſſary to make but a ſmall opening, in order to avoid the exhauſting ſweats, the Colliquative Diarrhœa, and proſtration of ſtrength which would inevitably follow.

Before I diſmiſs this ſubject, I muſt beg leave to preſent my readers with a quotation from De Haen, as it points out pretty clearly the idea this author entertained of the fever attending deep-ſeated ſuppurations.

After giving the hiſtory of a diſſection performed on a ſubject who died of a Hectic fever, from purulent matter lodged between the Pſoas and other muſcles about the loins, he ſpeaks as follows:

Ergo Phthiſis eſt infinite varia, pro varia parte affecta; unde et pro diverſo, viſcere affecto, diverſo nomine gaudet, V. G. Phthiſis Pulmonalis, aut Hepaticæ, aut Splenicæ, aut Meſentericæ, aut Nephriticæ, et ſic porro. Qui autem hæcce vocanda, ſi eſt a ſede denominanda, cellularis eſt quum in celluloſa membrana, muſculis interſtrata ſedem haberet. Videtur autem res tota ſic habuiſſe, a contuſione inflammatio et ſuppuratio nata eſt, pus ibidem loci collectum et neglectum ſanguis ejuſdem abſorptione corruptus, purulentus redditus, pulmone exoneravit ſeſe, quemadmodum in ea Phthiſeos ſpecie quam in antecedentibus ex pluribus demonſtraveram cadaveribus. Facta vero apertura, cum nunc reſiſtentia ad dorſum amota eſt, nulla ultra materiæ purulentæ per pulmonem, ſed unice per apertum locum, evacuatio contigit.†

I have given here the paſſage at full length, as it ably ſupports the doctrine of the abſorption of pus, which Doctor Reid ſeems to combat. I need only call the attention of my readers to the firſt part of the quotation, in order to inform them what difference De Haen would willingly have eſtabliſhed between a Phthiſis Pulmonalis, and a Phthiſis Pſoadica, or one from an Abſceſs ſituate in any other part of the body.

Page 88. " In recent affections of the " Lungs, when their ſubſtance is inflamed, " and before tubercles are formed, the " fever is continued, and ſimilar to that " attending inflammations of the Pleura " and other parts of the body. When the " organ becomes more diſeaſed, when tubercles are formed, and the ſubſtance is

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† Vide De Haen Ratio Med. vol. i. p. 223.

"more or leſs impervious to the air in "reſpiration, but before any pus appears "in the expectoration, the fever changes "its type; has a remiſſion of many hours "in the forenoon, and exacerbation at "noon or evening, continues all night, and "terminates about four in the morning, "by ſweat on the breaſt, and upper parts "of the body. If then the Pulmonary "Hectic fever were occaſioned by the corroſive acrimony of pus abſorbed from "the diſeaſed Lungs, from whence does "it proceed before the tubercles are "ſuppurated, or any pus formed in the "Lungs?

"For that the fever is completely formed "in recent affections, before any ſymptoms "have indicated the exiſtence of matter, "or when there has not a particle appeared in the expectoration; nay, when very "little has been ſpit up, and that merely "white phlegm; I appeal to the experience of every Practitioner converſant "with this period of *the complaint*."

Tubercles are well known to exiſt a long time in the Lungs without occaſioning much diſturbance in the ſyſtem; if however it happens that the body in ſuch a caſe, be imprudently expoſed to cold, a cough is brought on, and often continues until it terminates in a Phthiſis Pulmonalis. The application of cold operates ſo far as to inflame the tubercles, whereby the cough is excited, which ſeldom ſubſiſts very long without being attended with an accelerated pulſe.

This cough and frequency of pulſe go on haraſſing the patient, and uſher in at length the Hectic fever.

I am ſurprized to find Dr. Reid's obſervations on the ſtate of this fever differ ſo eſſentially from thoſe of other Phyſicians, who have paid much attention to the ſubject. Every Practitioner who has anxiouſly watched the approach of the Hectic fever, will probably admit, that a very conſiderable quickneſs in the pulſe has frequently ſubſiſted for many weeks before any regular remiſſions could be diſtinguiſhed. To what cauſe muſt this quickneſs of pulſe be aſcribed? moſt undoubtedly to the inflammation of tubercles; for theſe are often known to remain in a ſtate of indolence, until an inflammation from ſome cauſe or other is ſuperinduced. If regular Hectic ſymptoms ever diſcover themſelves before the purulent expectoration appears, it is to be preſumed, that the tubercles have come to ſuppuration, though no purulent matter is yet diſcharged by coughing. If this is not the caſe, how comes it to paſs, that the Hectic ſymptoms have not appeared during the continued fever juſt now mentioned, when the Lungs are certainly ſtuffed with inflamed tubercles? If Doctor Reid's idea on this ſubject was juſt, we ſhould have had a Hectic fever beginning at the very period we conceive the tubercles to be inflamed: but this I am perſuaded is ſeldom or never the caſe, for moſt Practitioners have probably met with this continued fever, and found it often ſubſiſt for a long time without any evident remiſſion.

I have, no doubt, that regular hectic paroxyſms do frequently ſhew themſelves previous to the appearance of pus in the expectoration: but does the conſequence follow, that no ſuppuration has taken place in the Lungs? We cannot ſurely expect that the matter will always appear in the ſpitting immediately on its formation in the tubercle: if we do, we will often be diſappointed. It is no rare occurrence to find a Conſumptive patient emaciated to the utmoſt degree, by a Hectic fever from an ulcer in the Lungs, without a particle of pus appearing in what is coughed up. No perſon whatſoever can determine how long the matter may remain in its cyſt before it is diſcharged, though in general it is found mixed with the mucus in a ſhort time after the appearance of the Hectic fever; and I imagine, that Dr. Reid himſelf will admit, that, in all thoſe caſes, which he has attentively noticed, the expectoration became purulent ſhortly after the Hectic paroxyſms began to be formed.

To illuſtrate this matter, let us turn our attention to an Abſceſs, from Pneumonic inflammation.

For ſeveral days, the fever attending this diſorder is of the continued type, as we generally ſpeak; but if no reſolution takes place after the firſt fortnight, and if the patient be attacked with cold ſhiverings at irregular or regular periods, Phyſicians agree that an Abſceſs is forming in the Lungs.†

Moreover, evening exacerbations are uſhered in before any pus appears in the expectoration, and matters go on in

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† That in ſuch caſes, a ſuppuration has actually begun, may be concluded from the patient's being frequently affected with ſlight and cold ſhiverings, and with a ſenſe of cold, felt ſometimes in one, and ſometimes in another part of the body. We form the ſame concluſion alſo from the ſtate of the pulſe, which is commonly leſs frequent and ſofter, but ſometimes quicker and fuller than before.

That a ſuppuration is already formed may be inferred from there being a conſiderable remiſſion of the pain which had before ſubſiſted, while along with this, the cough and eſpecially the diſpnæa continue, and are rather augmented. At the ſame time, the frequency of the pulſe is rather increaſed; the feveriſh ſtate ſuffers conſiderable exacerbations every evening, and by degrees a Hectic, in all its circumſtances, comes to be formed.

Vide Cullen's F. Lines, vol. i. p. 200.

the ſame manner as in the ulcer from tubercles. A cold ſhivering is generally the firſt ſymptom that diſcovers itſelf on the formation of an internal Abſceſs from acute inflammation; and Phyſicians have ſo much relied upon this ſymptom, that they have always conſidered it as a mark of beginning ulceration; but when the remiſſions are completely formed, they entertain no doubts of its exiſtence. For my part, I believe theſe diagnoſtics have ſerved Practitioners faithfully, nor do I think they will ever relinquiſh them, through the ingenious perſuaſions of Dr. Reid. If remiſſions appeared at ſo early a period as he ſuppoſes, Phyſicians would not have been ſo frequently miſtaken in their diagnoſtics, as we find them every day, and patients would ſtand a better chance for recovery than we know they generally do, by having their diſorder ſo early diſcovered. But how often do we find Practitioners, of the firſt abilities err in this point, for nothing is more common than to ſee an incipient Phthiſis taken from ſome other diſorder.

But Doctor Reid is of opinion, that as ſoon as the tubercles are formed, a remiſſion takes place: no other concluſion can poſſibly be drawn from his own expreſſions. "When the organ becomes more diſeaſed, "when tubercles are formed, and the ſub- "ſtance of the Lungs is rendered more "or leſs impervious to the air, &c."

It is altogether unneceſſary to enter into a minute diſcuſſion of this ſubject; for a perſon but ſuperficially acquainted with the diſorder in queſtion, muſt know that tubercles are in general a long time formed, before the ſmalleſt ſymptom of a Hectic fever appears, even after theſe tubercles are inflamed, as we before obſerved, the fever is frequently found to ſubſiſt for a conſiderable time without any *tendency to remit*.

Page 90. "On the other hand, if ab- "ſorption was really the cauſe of this "fever, it would be preſent always and "in every caſe where matter, real pus is "ſpit up from the Lungs: but we have "inſtances, and from the beſt authority,

“ of matter being ſpit up during many
“ years, without any ſymptom of Hectic
“ fever, or even injury to the health of
“ the patient, probably from a ſingle
“ vomica. If abſorption were the uſual
“ and common proceſs of nature, how
“ are we to account for the abſence of its
“ effects in thoſe caſes. Shall we ſay be-
“ cauſe the ſubſtance of the Lungs did
“ not become impervious to air, there
“ was no obſtruction to their regular
“ excretions.”

Inſtances have now and then occurred of an expectoration of purulent matter, without any ſymptom of Hectic fever being at the ſame time preſent. This is more frequently the caſe in an Abſceſs from Pneumonic inflammation and hemorrhagy, than perhaps from any other cauſe: even when the Hectic fever ſupervenes, there is a greater probability of its terminating ſucceſsfully in theſe, than in moſt other inſtances.

To account for this diverſity in the effects of Abſceſſes in the Lungs, it ſhould be obſerved, that there is a material difference in the nature of theſe Abſceſſes. In that ſpecies from Tubercles we have endeavoured to prove, and we hope to the ſatiſfaction of our readers, that the cauſe was very frequently firmly rooted in the conſtitution. Agreeable to this doctrine, it is a very rare occurrence to find an Abſceſs from Tubercles continue for any length of time, without being accompanied with Hectic fever. But in that ſpecies from Pleuriſy and Hemorrhagy, the cauſe not being ſo malignant, and ariſing from mere topical inflammation, all the purulent matter is often found to be diſcharged before any ſymptom of Hectic fever has *ſupervened*.

To go farther. In thoſe caſes, where no difference can be diſcovered in the cauſe of the Abſceſs, as in many inſtances of ulcers from Pneumonic inflammation, we muſt look for the difference of the effects in the difference of the conſtitutions. No other ſuppoſition, it is preſumed, will explain the phænomenon. For example, if two perſons were attacked at the ſame time with ulcers from Pneumonic inflammation,

mation, in whom not the ſmalleſt tendency to a Phthiſis had exiſted, and that one eſcaped unhurt, while the other fell a victim to the diſorder: muſt we not aſcribe this variation in the effects of the ulcers, to the difference of the patients conſtitutions. Perhaps, an extremely irritable fibre † may be more liable to Phthiſis on this occaſion, than a different ſtate of the ſolids.

In the Phthiſis Scrophuloſa it is probable, that no particular ſtate of the fibres, or peculiarity of conſtitution is concerned in producing the diſeaſe; as every day's experience informs us, that as ſoon as the Tubercles are ſuppurated, almoſt every conſtitution ſuffers from their virulence: ſo that in thoſe caſes, we ſhould rather attribute the Hectic fever to the malignancy of the cauſe, than to any idioſyncraſy, or particular ſtate of the ſolids. As an illuſtration of this ſubject, we may obſerve, that the mortality of putrid fevers is ſometimes owing to the violence of the cauſe, and at others, to the peculiarity of the patient's habit of body; numberleſs examples of this may be adduced, but the fact is ſo well known, that it needs no farther elucidation.

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† Vid. p. 210, et ſequentia.

From theſe conſiderations, I hope it will appear, why purulent matter may be diſcharged from the Lungs without any Hectic fever being at the ſame time preſent.

In affections of the Lungs, where purulent-like matter is ſpit up for ſeveral years, it is more than probable, that this ſubſtance is moſt commonly mucus. The excretories of the mucous glands in the Lungs, acquire the ſame diſpoſition in this complaint, as thoſe of the Urethra in a Gonorrhœa of long ſtanding: in both caſes there is no ulceration, nor any danger to be apprehended, except from the conſtant drain of fluids from the body.

Page 92. "In Abſceſſes on the internal parts of the body, when a great
" diſcharge of matter takes place, and in
" amputations of the lower extremities,
" where a large ſurface is conſtantly co-

“ vered with pus, the ſymptomatic fever, “ however violent, has not the moſt diſ- “ tant affinity with the Pulmonary Hec- “ tic.”

In many ulcers, attended with a purulent diſcharge, a ſymptomatic fever of the continued type frequently accompanies them, and is generally brought on by the wound inflicted on a ſenſible part, or by the pain and inflammation of the ſore. But this ſymptomatic fever is different, toto cælo, from the Hectic fever attendant on ulcers, and accurately deſcribed by Phyſicians and Surgeons.

The one ariſes from the abſorption of matter, but the other from mere irritation. It appears very extraordinary, that all the writers on ulcers ſhould be ſo defective in obſervation, as to miſtake a fever of the continued type, for one of the Hectic kind: both the ſpecies are mentioned by moſt Surgical Authors, as occurring every day in their practice on ulcers: ſo that it is improbable to ſuppoſe they would add to the catalogue of our woes, by obtruding a diſeaſe on us, which had no foundation in nature.

For my part, I am diſpoſed to rely on the concurring teſtimony of all Practitioners, and ſhall never relinquiſh ſuch authority, till I am convinced of my error by experience.

I will readily admit, that the ſymptomatic fever, ſometimes accompanying ulcers, has not the moſt diſtant affinity with the Pulmonary Hectic; but I am fully perſuaded, that at other times, the Hectic paroxyſms are better marked, than in ſome caſes of real Pulmonary Conſumption.

Page 93. "When the venereal virus "is abſorbed by the Lymphatics, it ſtops "in the glands of the groin, and pro- "duces a *Bubo*."

After producing many examples of purulent matter being abſorbed, and afterwards arreſted in the lymphatic glands,

Dr. Reid draws the following concluſion:

Page 96. "If matter were abſorbed "by the lymphatics in the Lungs, parti-

"cularly by thoſe paſſing from the upper "part, which is firſt diſeaſed; is it not "probable, that the pus would ſtop in "the lymphatic glands about the clavicles "(as we have before ſhewn it is its nature "to do) and that ſwellings there would "be a conſtant attendant upon the diſ-"eaſe? whereas, except in ſcrophulous ha-"bits theſe glands are ſeldom affected."

Many arguments might be advanced here, which would probably overthrow the reaſoning of our Author; but the Reviewers remarks on this paſſage, anticipate any obſervations that might be delivered.

"Another argument, on which the Au-"thor dwells, appears to us of very little "validity. He concludes from analogy, "that if matter were abſorbed by the "lymphatics in the Lungs, it would "occaſion tumors in the lymphatic glands "about the clavicles, which lie in the "courſe to the Thoracic duct. As theſe "are ſeldom found, he argues that no "abſorption takes place. But ſurely ab-

" ſorption may happen by a much ſhorter " road. In the eroded ſtate of the Lungs, " there can be little doubt, that matter " would paſs very readily from the air " cells into the extreme branches of the " Pulmonary vein, and thus be conveyed " directly to the heart †."

New Theory of Hectic Fever.

DR. REID having endeavoured to overturn all the former Theories of Hectic fever, preſents us with his own, which from its ſimplicity, the new and ingenious arguments advanced in its ſupport, merits a very ſerious conſideration.

Page 105. " When the Lungs from " inflammation, or the formation of Tu- " bercles or Vomicæ, are rendered in part " impervious to the air in inſpiration, the " uſual quantity of fluid cannot be carried " off by the action of reſpiration: the " quantity ſo retained will remain in the

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† Monthly Review, vol. 68. p. 332.

"habit till excreted by ſome other emunc-
"tory. That quantity of fluid ſo re-
"tained, together with Phlogiſton, I con-
"ceive to be the great and principal cauſe
"of Pulmonary Hectic fever, which in-
"variably abates as ſoon as it is diſcharged
"by the pores of the ſkin, and as the
"impediment to its exit by the Lungs
"continues, ſo the fever is daily renewed,
"that the conſtitution may be relieved
"from its accumulated *burthen.*"

In a former part of this Appendix, I have attempted to prove, and I hope with ſome ſucceſs, that Tubercles have frequently ſubſiſted for a length of time, even in a ſtate of inflammation, without any ſymptom of Hectic fever being at the ſame time preſent; it is of courſe, unneceſſary to inſiſt any farther on that ſubject. In Pneumonic inflammation, the Lungs do not admit of a full dilatation: this is evident, from the quick and laborious breathing that attends the diſorder; hence the Lungs muſt be rendered in part impervious to the air. But if no remedies are employed, or if, with the uſual remedies, the inflammation gains ground, the breathing becomes altogether ſo ſhort and laborious, that a conſiderable portion of the internal ſurface of the Lungs may be juſtly ſuppoſed inacceſſible to the air: yet in thoſe caſes, we ſeldom diſcover any Hectic ſymptoms except an ulceration takes place: the fever is always of the continued type, and has no exacerbation except what is common to other febrile diſorders. Here the uſual quantity of fluid cannot poſſibly be carried off by the action of reſpiration, according to Dr. Reid's own principles: yet the diſorder has not the ſmalleſt reſemblance to the Pulmonary Hectic fever. But the Doctor aſſerts † that vomicæ have been thrown up from the Lungs, and purulent matter expectorated for a conſiderable time, without any ſymptom of Hectic fever accompanying them. It is not poſſible, in ſuch caſes, but the Lungs muſt be rendered as impervious to the air, as in many inſtances of confirmed Phthiſis Pulmonalis. Even Dr. Reid has brought forward theſe caſes as proofs

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* Vide p. 90.

proofs againſt the validity of abſorption, not conſidering at the ſame time, that the arguments he advanced, ſtrongly militated againſt the doctrine which he was afterwards to propoſe: for according to his idea, in every caſe of obſtruction in the Lungs, whether from Inflammation, Tubercles or Vomicæ, a Hectic fever muſt inevitably ariſe, to relieve the body from the accumulation of Phlogiſton, and the ſerous exhalation of the Lungs.

If Inflammation, Tubercles and Vomicæ occaſion a Hectic fever, by rendering the Lungs impervious to the air in reſpiration, ſo ought other diſorders, which produce the ſame effect on the Lungs. Thus an Hydrothorax, a humoral Aſthma, and ſome ſpecies of Catarrh do often impede the ingreſs of the air to the Lungs, as effectually as ulcers that are attended with Hectic fevers; yet we never find a fever of this kind accompany any of theſe diſorders. From the ſtate of reſpiration in them, it is to be preſumed, that the Lungs are in no ſmall degree impervious to the air; the quick and laborious breathing ſo often attendant on them, in the laſt ſtage eſpecially, proves this to a demonſtration.

When the cavity of the Thorax is full of water, is it not evident, that the Lungs cannot be dilated to their uſual dimenſions. The water ſurrounding them on all ſides, muſt compreſs them into a conſiderably ſmaller compaſs than they poſſeſſed before the commencement of this diſorder: hence the air cannot poſſibly have acceſs to a large portion of the internal ſurface of the Lungs; and hence alſo, a Hectic fever would inevitably be the conſequence, if it aroſe from ſuch a cauſe in any caſe. When the water is lodged in the cellular texture of the Lungs, which is no rare occurrence, their dilatation will be as effectually prevented as when the water is in the cavity of the cheſt. In ſome caſes of humoural Aſthma and Catarrh, the air veſicles are ſo overcharged with mucus, that the breathing is frequently rendered as laborious as in Pneumonic inflammation: in theſe caſes, the Lungs cannot undergo the uſual degree of expanſion, and of courſe cannot have the ordinary quantity of fluid carried off by the action of reſpiration; yet no Hectic fever ever ariſes to relieve the Lungs from the accumulation of Phlogiſton, and the retained fluids.

Page 121. " When a Diarrhœa appears " in the laſt ſtage of the diſeaſe, it has " been accounted for by the pus being " abſorbed and running off by the inteſ- " tines. At this time, the Lungs are " conſiderably reduced and waſted, more " than half their ſubſtance being diſſolved " into pus and expectorated. Allowing that " the lymphatic veſſels do abſorb pus from " the lungs, theſe veſſels muſt diminiſh in " the ſame ratio as the ſubſtance of the " lungs. Suppoſing then, that the Diarrhœa " proceeds from the abſorption of pus, why " does it not appear more early in the diſ- " eaſe when there is a greater extent of " ſurface covered with matter, and when " a larger number of the abſorbent veſſels " remain uninjured? whereas this ſymp- " tom does not appear till after the Hectic " fever and colliquative ſweats have con-

“ tinued long, and the Lungs diminiſhed
“ in their ſubſtance, are as it were drowned
“ in purulent matter.”

Moſt Phyſicians, in endeavouring to account for the Colliquative Diarrhœa of Hectic fevers, on the principle of purulent matter acting on the alimentary canal, did not conſider the very plauſible objections that might be made againſt their reaſoning. Accordingly Doctor Reid not finding them fully explicit on this ſubject, has very properly argued againſt the long received opinion. His arguments however, appear to me more ingenious than convincing.

There ſeems to be a law eſtabliſhed between the internal and external evacuations, that in proportion as one is diminiſhed, the other is increaſed, and vice verſa. Thus when the perſpiration is checked by cold, or otherwiſe at the ſurface, a Diarrhœa or flow of urine ſupervenes. In like manner, when the perſpiration is increaſed, or when a Diaphoreſis or ſweat comes on from any cauſe, the the urine is diminiſhed, and a coſtiveneſs is commonly preſent, from the inteſtinal canal being deprived of the liquid matter that keeps it ſoluble. From theſe obſervations, it will, I expect, be no difficult matter to account for the colliquative Diarrhœa being reſerved for the laſt ſtage of the Phthiſis Pulmonalis.

Though a Diarrhœa does ſometimes appear in different ſtages of this diſorder; yet it is moſt commonly reſerved for the laſt and deciſive period. The ſweats which attend it, by directing the tendency of the fluids to the external parts, are ſufficient to counteract the influence of the abſorbed matter on the inteſtines; but, when by the progreſs of the diſeaſe, the conſtitution is ſo exhauſted as not to be capable of exciting much fever, the ſweats are conſiderably diminiſhed or diſappear altogether, and the colliquative Diarrhœa then enſues. Thus we find, that in a ſhort time after the ſweatings begin to ceaſe, the acrimony of the ulcer begins to exert its virulence on the inteſtines, by producing a Diarrhœa. There is little doubt alſo, that the Diarrhœa which occurs, at times, in an early period, originates from the ſame cauſe: for it is very well known, that Hectic ſweats are frequently irregular, and are often abſent altogether for a certain time: ſo that in ſuch caſes when the matter of the ulcer is transferred to the inteſtines, it will produce, at leaſt, a temporary Diarrhœa. It cannot, however, prove ſo pernicious to the conſtitution as that which occurs in the laſt ſtage of the diſorder; for, in the former caſe, the ſtrength of the body is very little impaired, and is able of courſe, to reſiſt the effects of the acrimony, while in the latter, the general debility of the habit favours its operation: indeed, it is in general found, that the one is removed by medicines of a moderate aſtringency, while the moſt powerful in the Materia Medica have little or no effect in the other.

I N D E X.

A

PAGE.

ANGINA Pectoris, ſymptoms attending it ſomewhat ſimilar to thoſe of incipient Phthiſis 11

Aphthæ, their appearance in the laſt ſtage of Phthiſis — — 16

Abſorption, ſaid to account for the Phænomena of Hectic fevers in general — 17

Alkali Cauſtic, fixed, the changes it produces on pus and mucus — — 27

Anus, from its ſituation liable to malignant ulcers 39

Abſceſs, why not generally the conſequence of a Hemoptyſis — — 43

Atmoſphere, its effects on the human lungs 47

Acrimony, not in general concerned in the production of Tubercles in the lungs — 67

Aſthma, how far concerned in producing Phthiſis 68

Abſtinence from animal food, its utility in the early period of Pulmonary conſumption — 93

Animal matter one of the conſtituent parts of milk 105

Acidity produced by the conſtant uſe of milk 106

Antients, their ſucceſs in treating conſumptive patients — — — 151

Aſtringency, a property of Briſtol and Mallow waters — — — 165

Aſtringents,

INDEX.

PAGE.

Aſtringents, their uſe in the advanced ſtage of Phthiſis — — — 171
Amygdalæ, inflammation of, ſeldom attended with danger — — — 182
Affection, Catarrhal, in general not capable of introducing a conſumption — — — 186

B

Body, decay thereof in beginning conſumption 11
Bronchiæ, their ſenſibility prevents the ſtagnation of effuſed fluids — — 43
Bandages, their pernicious effects on infants 54
Bronchii Mucous, follicles of, not attended with much inflammation; ſuppoſed therefore incapable of producing a permanent ulcer in moſt caſes 60
Bronchial glands, ſuppoſed by ſome writers to be the ſeat of tubercles — 77
Blood-letting, its uſe in the Phthiſis Pulmonalis 82
Blood loſt by veneſection or otherwiſe, if conſiderable, not ſoon reſtored by the conſtitution 97
Bark given with ſafety in Phthiſis Scrophuloſa 130
Bell, Mr. his practice in treating ulcers not to be transferred in toto to the Phthiſis Pulmonalis 139
Bliſtering repeated, its utility in local inflammation 155
Briſtol Waters, how far uſeful in Phthiſis 164
Bronchii Mucous, glands of, affected with ſpaſmodic conſtriction — — 179

INDEX.

C

PAGE.

Cullen, Dr. his definition —— 9
Calculi often found in the lungs — 64
Chyle, how acted upon by the ſyſtem — 96
Conſumptions, Pulmonary, incurable from a ſcrophulous taint — — 158
Cicuta, ſometimes uſeful in Scrophula — 160
——-- joined with Peruvian Bark, how far uſeful 161
Cullen, Dr. his recommendation of Cicuta and Coltsfoot in his lectures —— 162

D

Darwin, Mr. Charles, his experiments on pus and Mucus —— —— 27
Drugs, their inefficacy in ſeveral diſeaſes - 50
Diſorders, eruptive, how far concerned in the formation of tubercles — — 64
Diatheſis Hydropic, common to thoſe who have been frequently blooded —— — 86
Diet, milk and vegetable, its reputed good effects 94
——, milk, appointed by nature for the ſuſtenance of young animals — — 103
——, milk, ſaid to be indicated from its efficacy in correcting the tendency of the fluids to putrefaction — — — 108
——, milk, not recommended from its ſuppoſed utility in correcting the putreſcency of Phthiſis 112
——, milk and vegetable, when to be adminiſtered 135

Deobſtruents,

INDEX.

PAGE.

Deobſtruents, how far neceſſary in Phthiſis 156

Diarrhœa, colliquative, of hectic ſevers explained 225

E

Epiſtaxis, its frequent and innocent recurrence accounted for — — 38

Exanthemata, not eaſy to determine how they operate in producing Phthiſis — 62

Emaciation, the conſequence of internal and external ulcers — — — 102

Exhauſting diet improper in ulcers attended with a profuſe diſcharge — — 136

Emetics, dangerous in the caſe of inflamed tubercles — — — 147

Excretories of the Mucous glands made to diſcharge matter by different irritating ſubſtances 181

Expectoration often alleviates the ſymptoms of Catarrh — 183

Extremities of the bones affected by Scrophula 194

F

Flocculi, their appearance when pus and vitriolic acid are mixed together — — 28

Foundation of Phthiſis often laid by Scrophula 56

Flax-dreſſers not more liable to Phthiſis than other artificers — — 66

Fluids, after ſecretion, brought back to the general maſs, in order to avoid the danger of accumulation — — — 99

Farinacea,

I N D E X.

PAGE.

Farinacea, when joined with milk, the only remedy to be employed in certain ſpecies of Phthiſis 112
Food, animal, more nutritious than vegetable 114
——————, leſs perſpirable than vegetable 119, 120
Fever, Hectic, ſometimes owing to the malignancy of the cauſe, at others to the delicacy of the patient's conſtitution —— —— 214

G

Gaber, Mr. his experiments on pus — 31
Galen, his account of the cauſes of Phthiſis 36, 59
Goat's Whey, its operation explained - 145

H

Haen, Mr. De, his account of ſome diſſections 20
———————— his inferences refuted 21, 22
Hemoptyſis not generally followed by a Phthiſis Pulmonalis —— —— 32
———— how productive of Phthiſis Pulmonalis —— — —— 41, 42
Hunter, Mr. John, his opinion on the vital principle of the blood — — 88
Haller, Dr. his idea about the Abſorption of Semen . — — — 98
Horſeback, riding on, much practiſed ſince the days of Sydenham —— — 148
————————, not ſo dangerous as it has lately been repreſented — — 149
Haen, De, his account of Abſceſſes at the Iſchium 202

Inflammation

INDEX.

I

PAGE.

Inflammation of the lungs in Phthiſis, ſuppoſed to be removed by repeated blood-letting 82
Inactivity in the organs of digeſtion and excretion, a great means of retaining the perſpirable matter — — — 117
Inflammation, Pneumonic, not generally followed by Conſumption — — 186

L

Languor early appears in Phthiſis — 10
Lungs, Conſumption of, hereditary — 30
—— much injured by the Meaſles — 61
—— readily hurt by chalky Concretions 65
—— liable to Dropſy from Aſthma — 70
Lymphatic Glands, ſuppoſed to exiſt in the lungs, and to be affected with Scrophula — 78
Lungs, Obſtructions of, not the cauſe of Emaciation — — — 100
——, Conſumptions of, not diminiſhed in number by the uſe of Briſtol or Mallow Waters 169
——, exhalent veſſels of, ſecrete a viſcid Lymph by the application of cold — 176
————————, pour out a light, thin, colourleſs liquor — — 180

Mucus

I N D E X.

M

PAGE.

Mucus diſtinguiſhed from Pus — 24
Milk, Aſſes, no ſpecific in Phthiſis — 144
Mercury not uſeful in Scrophula — 157
Mania, its effect in the cure of Phthiſis 172

P

Phthiſis Pulmonalis, hiſtory of, — 7
Purulent matter, excluded from the air, not attended with Hectic Fever — 18
Peripneumonia Notha, expectoration of, ſimilar to Pus — — — 23
Phthiſis Pulmonalis ſeldom runs its courſe without a ſpitting of blood — — 33
Phthiſical prediſpoſition, not neceſſary to produce an ulcer from Hemoptyſis — — 37
Plethora, partial or general, cauſe of Hemoptyſis 40
Phthiſis, incipient, often miſtaken for Catarrh 59
——— origin of, from the Lues Venerea 63
——— Pulmonalis joined with Tabes — 72
—————— Meſenterica — — ib.
—————— in the greater number of caſes ariſes from Tubercles — — 81
—————— always attended with Fever 101

Raulin,

INDEX.

R

PAGE.

Raulin, Dr. his argument againſt the uſe of milk in Conſumptions — — 4

——— his reaſoning not adopted — 5

Reid, Dr. his ſentiments on Phthiſis, different from other authors — — 175

——— his idea of Tubercles in the lungs 189

——— his arguments againſt the Abſorption of Pus — — — 197

——— his obſervations differ from thoſe of other phyſicians — — 206

——— his theory of Hectic fever 219—220

——— his account of Colliquative Diarrhœa 224

S

Serum, by ſtagnation in the Bronchii, converted into Pus — — — 43

Simplicity of preſcription commended — 53

Scrophulous Swellings, their diſappearance at the Achmé — — — 73

——— their attack on the lungs, after quitting the external parts — 75

———, indolent diſpoſition of, conſidered as a proof that they ariſe from no acrimony — — — 76

Syphillitic Tumors leſs indolent than thoſe of Scrophulæ — — — 128

Seafaring

INDEX.

PAGE.

Seafaring life attended with coſtiveneſs — 150
Supporting the perſpiration uſeful in Phthiſis 153
Scrophulous temperament, generally marked in Phthiſical patients — — 190
Scrophula, its conſtant attendance on Phthiſis 193
——— its appearance in parts where no Lymphatics are found — —— 196

T

Tubercles, inflamed ſymptoms of, — 13
———, the changes they undergo in Phthiſis 35
——— in the lungs, generally terminate in Phthiſis Pulmonalis —— 74
Thorax, ſlight deformity of, occaſions Plethora in the lungs —— —— 125
Tubercles, their exiſtence for ſome time without Hectic fever —— —— 220

U

Ulcers of the lungs brought on by the Venereal Virus —— —— 63
—— Scrophulous without a hereditary taint 71
——, treatment of, — — 137
——, debilitating regimen improper 138
Vegetable diet neceſſary in every ſpecies of Phthiſis 89

THE END.

E R R A T A.

Page 122, line 18, after *part* read *or*.
123, line 21, for *ſupports* read *ſupport*.
143, line 13, after *recommended* read *by writers*.
144, line 14, for *aſceſcent* read *aceſcent*.
150, line 21, for *chooſes* read *choſes*.
32, 33, 37, 40, 41, 43, 44, 56, for *an Hemoptyſis* read *a Hemoptyſis*.
36, 37, 42, 44, 108, for *an Hemorrhagy* read *a Hemorrhagy*.